AD-A143 875 THE CREATION OF A CENTRAL DATABASE ON A MICROCOMPUTER NETWORK(U) NAVAL POSTGRADUATE SCHOOL MONTEREY CA J G BOYNTON ET AL. MAR 84 1/3

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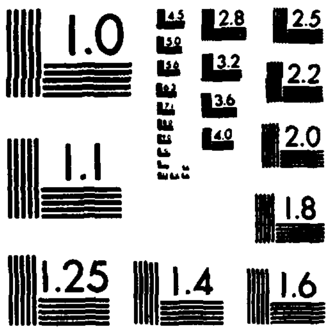
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NAVAL POSTGRADUATE SCHOOL
Monterey, California

THESIS

THE CREATION OF A CENTRAL DATABASE
ON A MICROCOMPUTER NETWORK

by

John G. Boynton
and
Ronald G. Nichols

March, 1984

Thesis Advisor: N. R. Lyons

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO. AD-A143875	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) The Creation of a Central Database on a Microcomputer Network		5. TYPE OF REPORT & PERIOD COVERED Master's Thesis March, 1984
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) John G. Boynton Ronald G. Nichols		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS Naval Postgraduate School Monterey, California 93943		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Naval Postgraduate School Monterey, California 93943		12. REPORT DATE March, 1984
		13. NUMBER OF PAGES 218
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

network, database, microcomputer, software design and system development

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This thesis discusses the design and development of a central database on a network of microcomputers. It provides an overview of the methodology utilized in creating the system, along with the problems associated with a central database. The thesis includes the source listings for the creation of the system and a discussion of the difficulties of controlling contention within the networked database environment.

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S/N 0102-LF-014-6601

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

The Creation of a Central Database on a Microcomputer Network

by

John G. Boynton
Major, United States Army
B.S., United States Military Academy, 1972

and

Ronald G. Nichols
Lieutenant Commander, SC, United States Navy
B.S., Ohio State University, 1974

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN INFORMATION SYSTEMS

from the

NAVAL POSTGRADUATE SCHOOL
March 1984

Authors: John G. Boynton

[illegible]

Approved by: [illegible]
Thesis Advisor

[illegible]
Second Reader

[illegible]
Chairman, Department of Administrative Science

[illegible]
Dean of Information and Policy Sciences

ABSTRACT

This thesis discusses the design and development of a central database on a network of microcomputers. It provides an overview of the methodology utilized in creating the system, along with the problems associated with a central database. The thesis includes the source listings for the creation of the system and a discussion of the difficulties of controlling contention within the networked database environment.

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I. INTRODUCTION

Current economic trends have brought about an increased awareness of the need for productivity gains in the workplace. Like all facets of business, government is finding increased pressures to reduce expenditures and still provide service to the people. To meet the challenges of reducing costs and maintaining service levels, government managers are looking toward office automation and computerization to increase individual productivity. The Navy Fleet Material Support Office (FMSC), like most Government Agencies, is doing its part to improve productivity.

The Defective Material Section of FMSO (Code 91423) is designated as the overall monitor for the quality deficiency management information reporting system. A Thesis entitled A System Analysis and Design For Updating the Internal Tracking of the Quality Deficiency Reporting System at the Navy's Fleet Material Support Office by Michael D. Carriger recommended the development of a prototype network of inexpensive microcomputers and the creation of a Central Database System. This prototype system will demonstrate the feasibility of automating the QDR Processing Procedures, and will allow the evaluation of processing with automated techniques. Additionally, the prototype will provide the basic design for future QDR Systems and its interaction with users. [Ref. 1]

Current microcomputer technology has allowed very powerful systems to be created at relatively low costs. Microprocessors with over 512,000 characters of memory can process over 500,000 instructions per second. Secondary storage units can access over 35 million characters of data at the rate of 5 million bits per second. Relational

Database systems allow microcomputers to create, update, and manage large databases of information at relatively low costs.

The purpose of this Thesis is to develop a Prototype Database Management Information System for use at the Defective Material Section of FMSO (Code 91423). This system will utilize current microcomputer technology and off-the-shelf hardware and software. Application programs will be generated with a high level database manipulation language. For this application, dBASE II (by Ashton-Tate), IBM-PC microcomputers, PCnet (by Orchid Technology), and 20 MB hard disk storage devices (by Tallgrass Technology) are utilized to create the Management Information System. This hardware and software was selected because: 1) it had already been evaluated and was in use at other sections of FMSO; 2) it appeared that it could meet the processing requirements for the QDR System; 3) it could be easily obtained with minimal cost to the project; and 4) it could be incorporated into both the short term and long term processing goals for FMSO [Ref. 1].

The major areas of concern for the project center around: 1) contention caused by multiple users accessing the same Data Base Files over a microcomputer network; 2) Security logon protection for the system; 3) Flexibility to respond to ad hoc information requests; and 4) providing meaningful system dialog for untrained computer users.

II. METHODOLOGY

The development of the Quality Deficiency Reporting (QDR) System was based on modern software engineering and design principles. Data flow diagrams, structure charts, and a high level programming language aided in the creation of the system. Using top-down design to provide a logical basis for development, the software creation involved: 1) studying and understanding the QDR process, 2) identifying at least one method of solving the problem, 3) creating data flow diagrams to show the gross data transformations, 4) using the data flow diagrams to construct a structure chart, and 5) describing each abstraction used in the solution in a manner that lends itself to eventual coding in a high level language. [Ref. 2]

The initial study of the QDR System was based on Michael D. Carriger's thesis work. This provided much of the background information that was necessary to formulate a possible solution. Based on the operational environment and the users' level of computer familiarity, it was decided that a menu driven system be created. This would provide an easy to understand interface for the unfamiliar user. Data flow diagrams were generated to identify the transformation of data from input to output. This provided a pictorial representation of the data used by the QDR System and established a means of identifying the changes that took place during the life of a QDR Case (See figure 2.1 and 2.2).

The data flow diagrams provided the basis for creating the system's hierarchical structure. By reviewing the basic transformations performed by the system, it became apparent that there are three main activities necessary for maintaining the Central Database. These basic activities

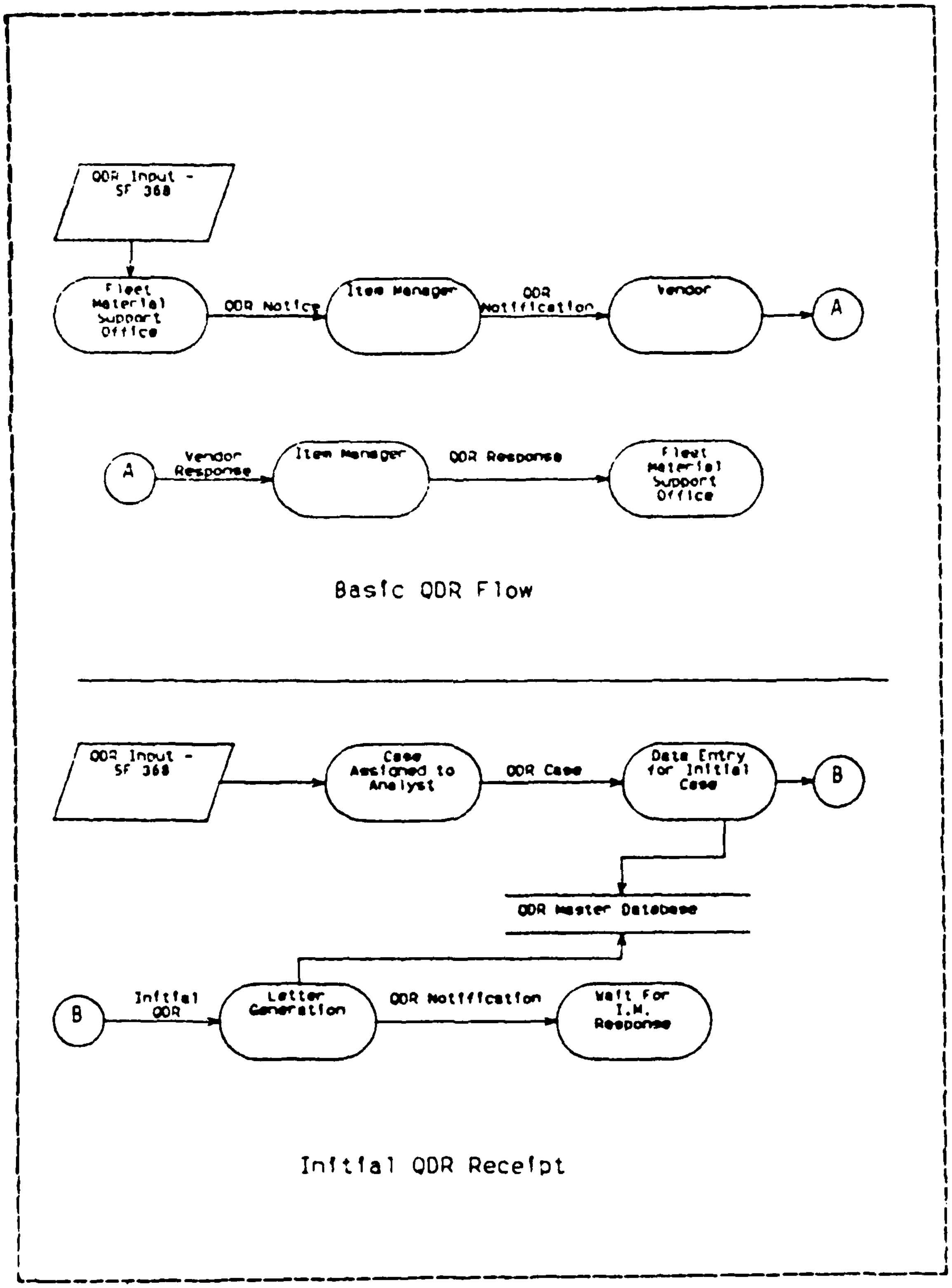


Figure 2.1 Basic QDR Flow and Initial QDR Receipt.

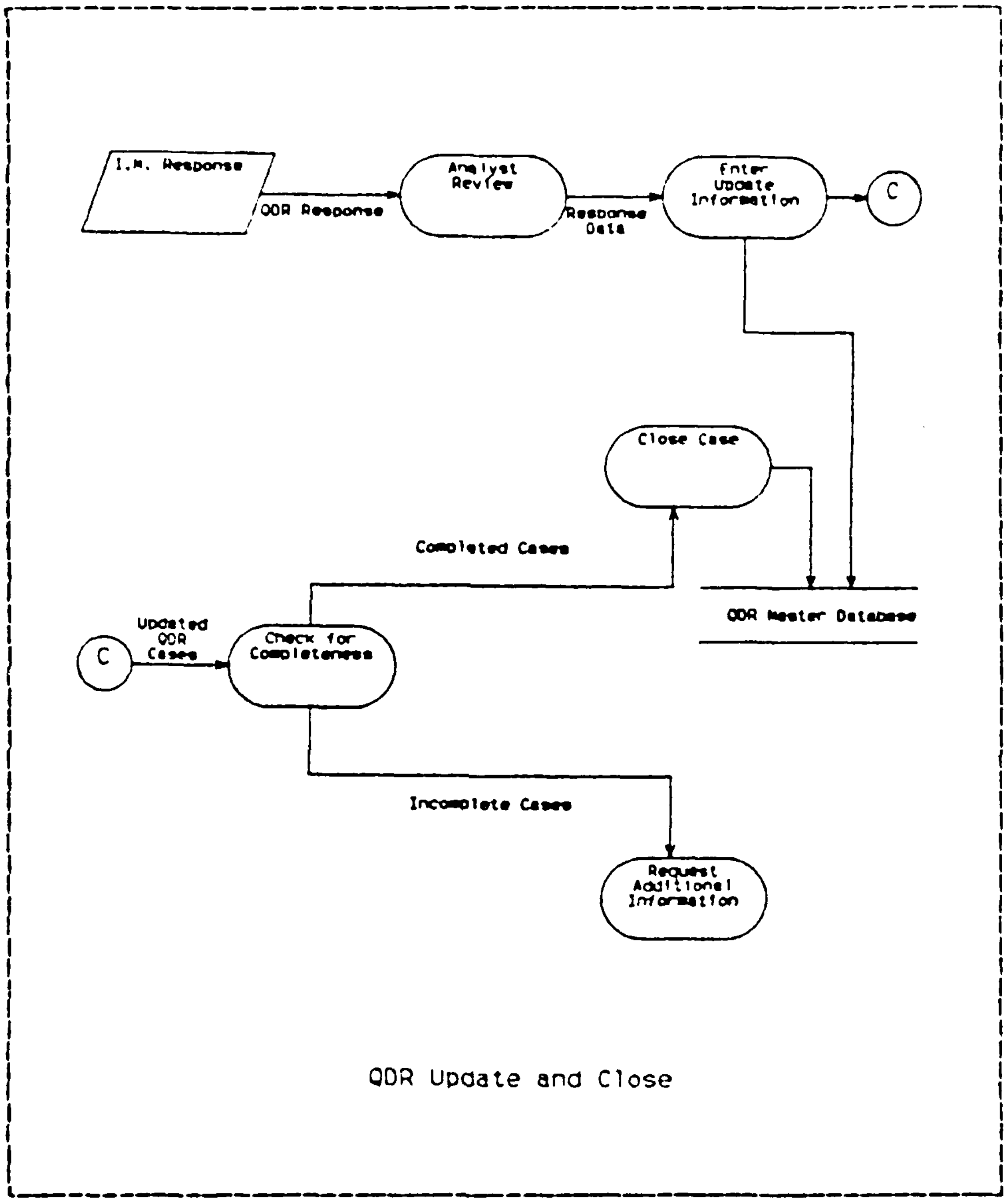


Figure 2.2 Qdr Update and Close.

prompted the creation of the Open Case, Update, and Close Case modules. All other functions associated with the QDR

System are support modules for presenting the Database information to the end user, maintaining support Database Files, and generating management information (See figures 2.3 and 2.4).

The QDR System was implemented using the command language for dBASE II, a Relational Database Product. This command language is a high level language that supports block structured development. It is an interpretive language that must be re-evaluated through each pass of the program execution. To ensure program clarity, the programs utilized meaningful names to identify variables and make the flow of information more apparent to the reader. Information hiding was utilized to reduce the amount of unnecessary information handled by each program. Required information is passed between programs as the data is needed for processing (See Appendix A for a complete listing of Passed Variables). Information hiding also conceals the processing algorithms used within a program. When interfacing programs, the programmer only needs to know what information passes between programs and not how the information is treated internally. The use of information hiding techniques reduces the complexity of systems development by allowing the programs to be developed independently based on interfacing requirements only. [Ref. 3] Another mechanism to simplify the programs is to include comment lines to make them more readable and understandable to maintenance personnel.

As each program was created, it was tested to ensure that it accurately performed the function for which it was designed and did not contain errors. As individual programs were tested, they were combined with other tested units to ensure compatibility between the various system segments. This integration testing was performed to ensure that the individual programs worked in conjunction with other

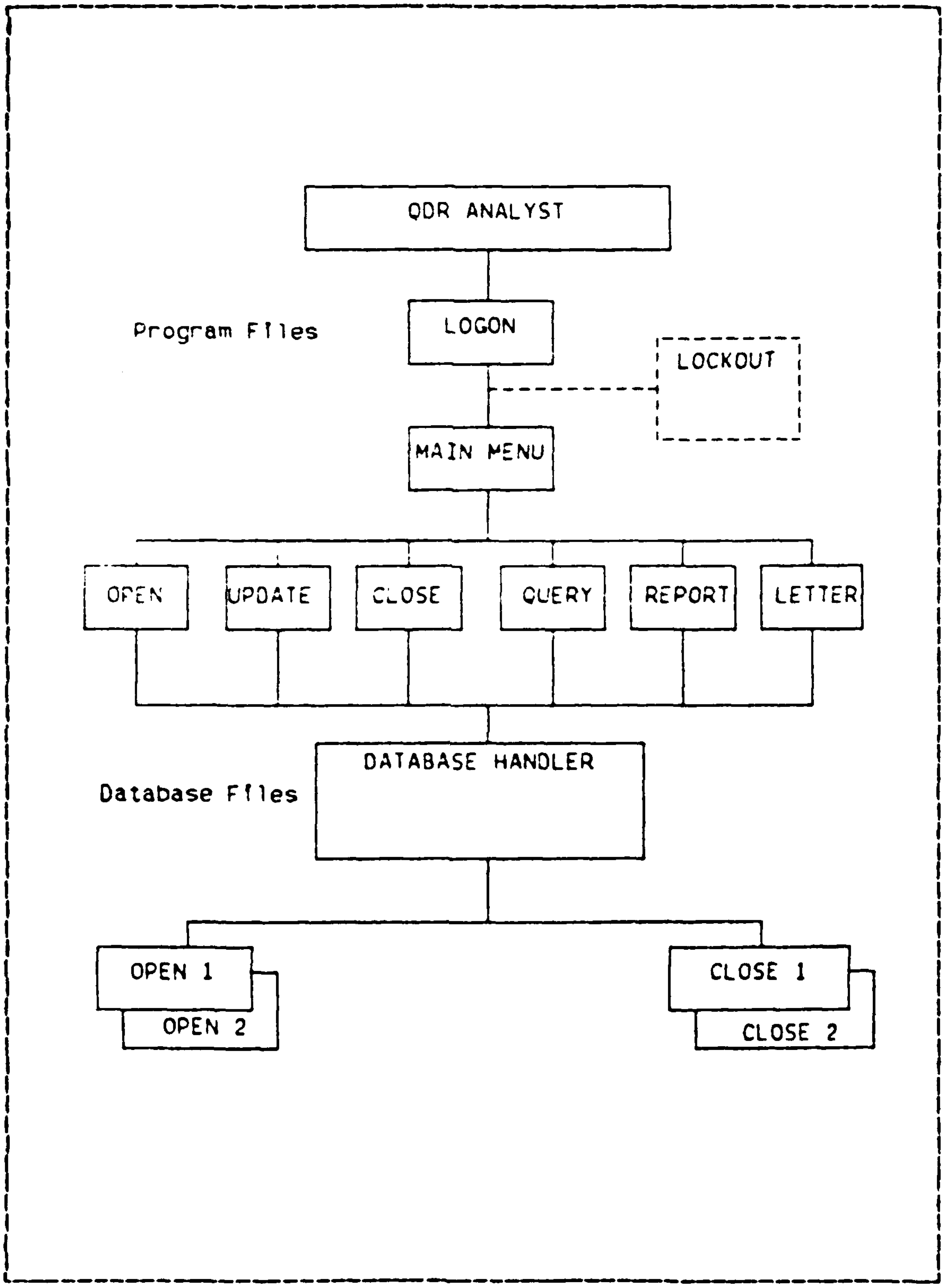


Figure 2.3 User's System Hierarchy.

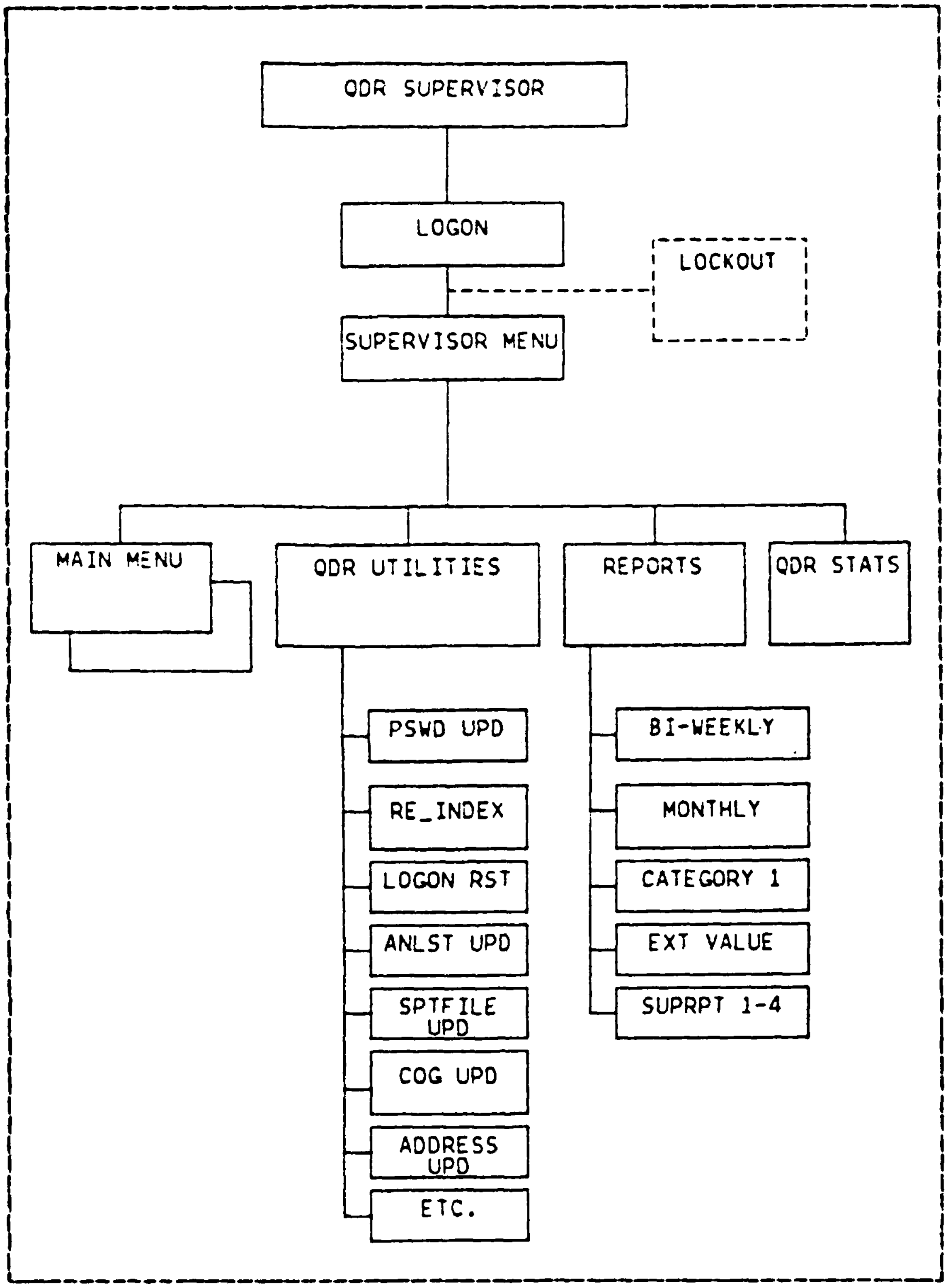


Figure 2.4 Supervisor's System Hierarchy.

programs and modules. As errors were detected in programs and modules, these bugs were corrected and then retesting was performed for both individual and integration tests. All of the initial tests were performed in a single user environment to reduce some of the system complexity. Once a program or module had completed both individual and integration testing, these units were then tested in the multi-user environment. Other aspects of the software development are discussed in more depth later.

III. SYSTEM DEVELOPMENT

The development of the QDR System considered many aspects of computer utilization. The system was designed as an integrated package of hardware and software that was to be utilized as a management information tool. To produce the desired results, both hardware selection and software development requirements were made considering the utilization of the system and the target group of system operators. Such things as user interface, the multi-user environment, security, system cost, and the availablity of system components were integrated in the methodology of developing the QDR System.

A. SOFTWARE

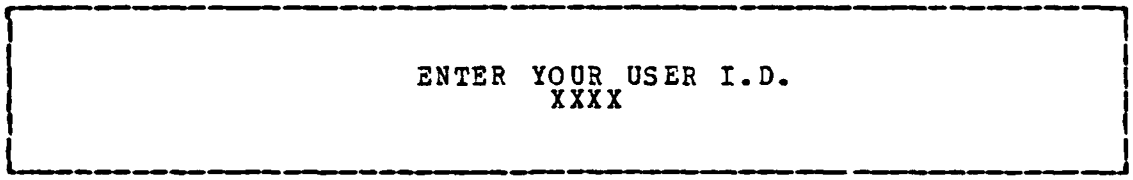
The original QDR software design centered around a data base consisting of 8,000 - 10,000 records in the Open File and 16,000 - 20,000 records in the Closed File. Each of these records contained thirty data fields and required 275 characters of data. Headquarters level changes to QDR processing procedures expanded the scope of the data files considerably. New data requirements in support of the Product Deficiency Reporting System and Evaluation Program (PDREP) increased the files to fifty four data elements requiring over 600 characters of data per QDR Case. (See Appendix B for a complete list of Database structures and Appendix C for the Data Element Definitions.) To accomodate these additional data items, the case records had to be split into two parts. This was necessary because of a restriction in the Database Management Software used for the system. The current DBMS allowed a maximum of thirty two data elements per database file.

The scope of the changes mentioned above required a total redesign of the QDR System. Up to that point, a substantial amount of design work and actual programming and testing had been completed. Although many of the "lessons learned" during the initial design could be applied to the redesign, and many of the initial algorithms could be modified and reused, the redevelopment effort required a significant amount of time and effort. All user interface programs had to be redesigned and, in many cases, reprogrammed to accomodate the new data elements and provide a meaningful interface. The change in scope drastically reduced the time available for complete testing, documentation and implementation thus resulting in the prototype system being more capable, but requiring additional effort in the above areas.

Much of the software development was aimed at providing a system that had an easy to understand user interface, could be used in a multi-user environment, provided a degree of security, and was maintainable. The following sections discuss each of these areas and provide some insight into how these were achieved. Throughout this chapter, the terms module and program are used interchangably.

1. User Interface With QDR System

The interface between the user and the QDR System was a major point of concentration to ensure the usefulness of the entire system. In order to allow for the lack of experience of the analysts with automated tools and to avoid training costs for newly assigned personnel, the perception that the personal computers were really "QDR Machines" was utilized. The entire dialog of a user with the machine was centered around the functional aspects of the current working environment. A menu based system was utilized to guide the analysts through their case processing. At each point where a choice could be made, the user was presented with an explicit message. If an invalid choice was made, the system would then provide a message indicating an error, and show the valid range of choices available to the user at that particular point. If the user was familiar with the range of valid inputs and did not make an entry error, then the messages would not appear on the screen. This allowed for the more experienced user to avoid some of the screen prompting. The System was written such that each of the user "QDR Machines" would automatically initialize itself and be in a state waiting for the user to logon (See figure 3.1).



```
ENTER YOUR USER I.D.
        XXXX
```

Figure 3.1 Logon Prompt.

This isolated the user from any of the underlying machine operating system and preparatory steps that are normally associated with putting today's microcomputers into operation. The only function that the computer was available for was the processing of QDR's. When an analyst terminated operations for the day the terminal would again go into a state ready for another user to logon or for the analyst to re-enter the system.

The procedure for an analyst to enter the QDR System is demonstrated by the following selection of screen displays and choices that are available. The process begins with entry into the system at the beginning of the day. Each analyst has been assigned a user I.D. and a unique password by the system supervisor. The system has earlier been brought up by the supervisor. The first screen presented prompts for the analyst to enter his unique access identification (See figure 3.1). If the access I.D. is not on file, or was entered incorrectly, a message comes on the

```
ACCESS I.D. NOT ON FILE
   PLEASE REENTER
```

Figure 3.2 Invalid I.D. Message.

screen (See figure 3.2). A check is also made to determine if the user is currently logged onto another terminal in the system. If currently logged on, then access is denied and the following message will then be displayed (See figure

```
USER CURRENTLY LOGGED ON
   LOGON TERMINATED
```

Figure 3.3 Currently Logged Message.

3.3). If the correct Access I.D. is entered then the system will prompt to enter the password. The password requires

```
ENTER PASSWORD FOLLOWED BY <CR>
```

Figure 3.4 Login Prompt.

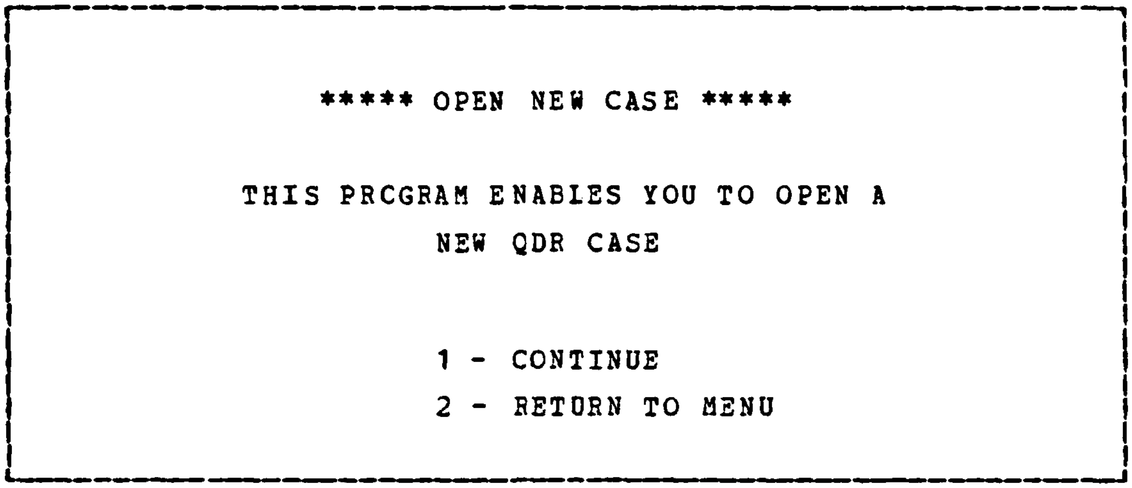
exact upper/lower case entry (Figure opn4). Three chances are given to successfully enter the password and if unsuccessful, the console is locked out and may only be put back into operation by the system supervisor. A successful logon will be followed by a greeting to the QDR System, and the user will be presented with the main menu which contains all of his processing options (See figure 3.5).

```
        WELCOME TO THE QDR AUTOMATED TRACKING SYSTEM

                  1 - Open New Record
                  2 - Close Record
                  3 - Update Record
                  4 - Originate Letter
                  5 - Report Generation
                  6 - Query
                  7 - Exit from the System

                    Enter Your Choice
```

Figure 3.5 Main Menu.

From the main menu (figure 3.5), the analyst has the option to open a new case, update an existing case, close a case, originate a letter to an item manager, get a listing of all of his open cases in the QDR System, query the databases for information or to leave the QDR System.

As an example of the process required to open a new QDR case, the following sequence shows the screens as presented to the analyst. In order to open a case, the analyst chooses a "1" from the main menu and then is presented with a screen where verification of desire is required. This allows the analyst to change his mind before beginning the process and to return to the main menu. A choice of "1" puts the user in the case opening process (See figure 3.6).



```
***** OPEN NEW CASE *****

THIS PRCGRAM ENABLES YOU TO OPEN A
NEW QDR CASE


1 - CONTINUE
2 - RETURN TO MENU
```

Figure 3.6   Verification Message.

The input screens presented to the user are designed with the source input document Standard Form 368 (SF 368) as the basis. Each of the items of information are captured from the numbered blccks of the SF 368. Where information is not identified on the form, yet is needed for the QDR case, input is requested at the location where most often written in by the analyst or by the originating office. The purpose of this was to maximize the ease and fluidity of data entry by the analyst by considering the physical location of the data as well as the logical relationship of the elements.

The first entry required was the date the case was received by FMSO. A standard (MMDDYY) format for dates was utilized throughout the QDR programs, based upon user specifications (See figure 3.7).

After entry of the national stock number, a prompt to verify the initial data is put on the screen. This enables the analyst to ensure that the correct case will be created and will alleviate a later need to delete an invalid case from the database (See figure 3.8). A choice of "2" allows the changing of any initial data item before continuing to the second screen.

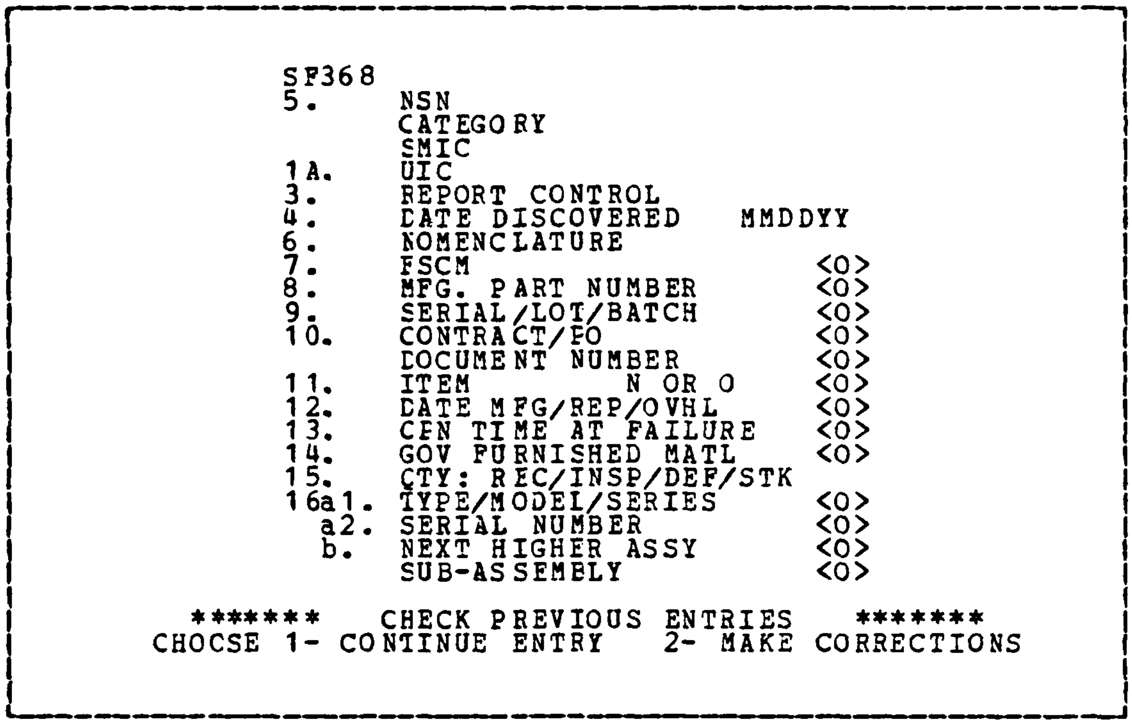
```
******** ENTER DATA FOR THE NEW CASE ********
********          FROM   SF 368        ********

 DATE RECEIVED BY FMSO    MMDDYY     'XXXXXX'
 CAT                                 'X'
 COG                                 'XX'
 NSN                                 'XXX-XX-XXXX-XXXX'
```

Figure 3.7 Initial Entry Screen.

```
          VERIFY ABOVE INFORMATION
      YOU MAY NOT CHANGE IT AFTER THIS
         WITHOUT STARTING OVER AGAIN
   1 - CONTINUE  2 - CHANGE  3 - EXIT
```

Figure 3.8 Bailout /Change Option.

The analyst is next presented with a full screen of data elements. The layout is such that the left side of the item labels contains the numbers relating to the SF 368 blocks. This portion is blank where the element is not on the SF 368. Following each element label is a reverse video representation showing the correct length of the input item. The inputs which are optional are marked by a <O> (See figure 3.9). The cursor moves from one data element to the next one as the analyst completes item entry. Any incorrect or out of bounds entry will result in a specific error message to the user showing the valid range of inputs. These error messages, when activated, appear on the last line of the screen. The user can thus consistently look to a single location for status or error messages from the QDR System.

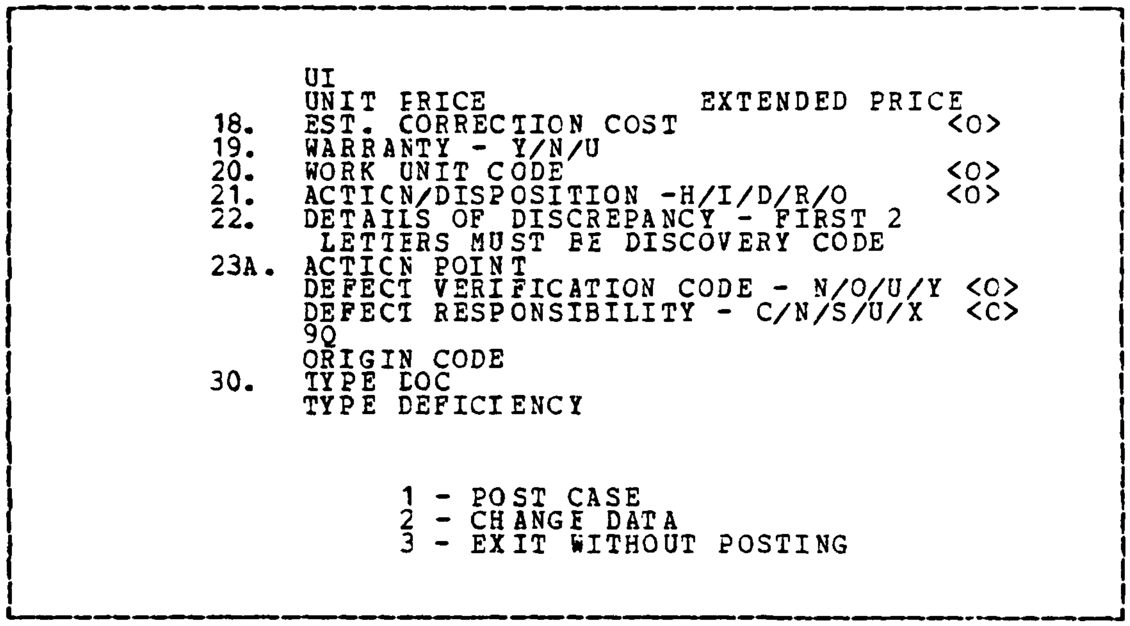


```
SF368
5.      NSN
        CATEGORY
        SMIC
1A.     UIC
3.      REPORT CONTROL
4.      DATE DISCOVERED    MMDDYY
6.      NOMENCLATURE
7.      FSCM                      <O>
8.      MFG. PART NUMBER          <O>
9.      SERIAL/LOT/BATCH          <O>
10.     CONTRACT/PO               <O>
        DOCUMENT NUMBER           <O>
11.     ITEM          N OR O      <O>
12.     DATE MFG/REP/OVHL         <O>
13.     OPN TIME AT FAILURE       <O>
14.     GOV FURNISHED MATL        <O>
15.     QTY: REC/INSP/DEF/STK
16a1.   TYPE/MODEL/SERIES         <O>
  a2.   SERIAL NUMBER             <O>
  b.    NEXT HIGHER ASSY          <O>
        SUB-ASSEMBLY              <O>

   *******    CHECK PREVIOUS ENTRIES    *******
CHOOSE 1- CONTINUE ENTRY    2- MAKE CORRECTIONS
```

Figure 3.9 First Screen of data.

Consistent with the previous choices of leaving a particular screen, the analyst has the ability to make changes before proceeding. The next screen of data presents the same basic format to the user, and allows the input of the second half of the data elements. The NSN and category of the case being input are echoed at the top of the screen so the analyst may keep track of them for later reference. Data items are calculated by the program where possible and then inserted into the screen at the appropriate point. The extended price is one such item which was previously hand computed (See figure 3.10).

Upon completion of data element entry, the analyst may elect to change an item, post the case or exit the opening program and go back to the main menu without posting the case. This is critical at this time in the entry



```
          UI
          UNIT PRICE             EXTENDED PRICE
    18.   EST. CORRECTION COST                 <O>
    19.   WARRANTY - Y/N/U
    20.   WORK UNIT CODE                       <O>
    21.   ACTICN/DISPOSITION -H/I/D/R/O        <O>
    22.   DETAILS OF DISCREPANCY - FIRST 2
           LETTERS MUST BE DISCOVERY CODE
    23A.  ACTICN POINT
          DEFECT VERIFICATION CODE - N/O/U/Y <O>
          DEFECT RESPONSIBILITY - C/N/S/U/X   <C>
          9Q
          ORIGIN CODE
    30.   TYPE DOC
          TYPE DEFICIENCY


               1 - POST CASE
               2 - CHANGE DATA
               3 - EXIT WITHOUT POSTING
```

Figure 3.10   Second Screen of Data.

process. If a major mistake had been detected, it would be best to re-initiate the entry of a particular case instead of using the update program to change each item. This gives the analyst a final point where the process can start over without any interaction with the current cases. From the users point of view it is comforting to know that an earlier mistake could be eliminated prior to posting. On a busy network, the posting process may take a few minutes, thus the analyst is re-assured that "all is well" by a screen giving a status report on the process (See figure 3.11).

After successful assignment of a case number and posting to the database, the case number is displayed on the screen (See figure 3.12). After noting the case number on the SF 368 for any future reference as needed, the analyst can clear the screen by pressing any key, and then will be back at the point where he may input another new QDR case or return to the main menu.

```
CASE BEING POSTED TO DATA BASE
       PLEASE STANDBY

***    DO NOT INTERRUPT    ***
```

Figure 3.11   Response to POST Choice.

```
CASE NUMBER OF THE NEW CASE
         '400192A'

  PRESS ANY KEY TO CONTINUE
```

Figure 3.12   Feedback to Analyst.

The above sequence gives a flavor of the screens and messages that are present in the QDR System. Foremost consideration in design of screens and menus was the ease of use by the analysts. The screen design in a pattern which matched the source document as much as possible while considering additional input requirements led to a clean, easy to understand representation. The error messages were directed at identifying a specific range of acceptable input values and presenting these to the analysts for their review. Consistency of input parameters was maintained to enable the user to react to prompts and choice points thus requiring a minimum of additional thought and attention to the process of data entry and interaction with the "QDR Machine" itself.

2. Multi-User Environment

The QDR System uses dBASE II to handle all aspects of the system's operations. This database management product is designed for a single user and does not provide the locking mechanisms necessary for a multi-user environment. To overcome this deficiency, a Database Handler was created to control access to the various database files. Access to the Database is achieved by calling the Database Handler routine and providing it with a two character alpha-numeric type code which represents the type of the desired access (See figure 3.13). The Database Handler will either expect additional parameters or will provide information depending on the selected access type.

In order to perform record locking or file write functions, the Database Handler must first establish write access to the database file that is being written to. A special "File Status" data file provides the mechanism to determine write access. As each user process calls the Database Handler for file write transactions, the file status is checked to see if the file is currently locked by another process. If the file is locked, the Database Handler enters into a test and wait loop until the file is made available. When the file is unlocked, the Database Handler will then lock the required file by placing the User I.D. of the operator into the file status file. There is a point of contention at the moment the file is released by a process. Each terminal on the network has its own copy of the Database Handler and as such, when a file is unlocked, other processes will perform the same locking action. To ensure that a process has obtained write access, a verification check is made just prior to actually performing the write operation. If write access has been obtained, the Database Handler will perform the write and release the data

The first character of the Access Code represents the file being accessed and the second character represents type of access desired.

First Character	Database File Used
1	OPEN1
2	OPEN2
3	CLOSE1
4	CLOSE2

Second Character	Database Action
A	Read - NSN Access (See note 1)
B	Read - Case Number Access
C	Write - Unlock Record
D	Read/Lock - NSN Access
E	Read/Lock - Case Access
F	New Record Creation (See note 2)
G	Record Unlock
H	Read - Record Number Access
I	Skip/Read - Record Number Access

Note 1: Open2 and Close2 do not have NSN Access and default to Case Number Access.

Note 2: Close1 and Close2 create new records from the Open File records being closed.

Figure 3.13 Database Handler Access Codes.

file for others. If write access is not obtained, the test and wait loop is entered again.

To perform a write operation, the entire database file is locked so that no one else can write to it. When an individual record must be updated, it is undesirable to leave the Database file locked while the operator is making updates to the record. To prevent this, a record locking capability was added to the Database Handler. This is done by including a timestamp data element in each data record. Prior to retrieving a record for update, the Database Handler checks to see if the record has previously been locked. Any attempt to update a locked record will result in a code being returned to the calling program/module (See

The Data Base Handler will return a one digit Code indicating the Success/Failure of a Data Base Access.

Return Code	Definition
0	Data Base Access Successful
1	Record Currently Locked
2-8	Unassigned (Available for future growth)
9	Record Not Found

Figure 3.14 Data Base Handler Return Codes.

Figure 3.14). As with general write operations, the database must be temporarily locked to allow the timestamp to be written out to the file. This record locking mechanism allows multiple users to function without unintentionally overwriting information.

3. System Security

Because of the amount of data held by the QDR System and the value of the information to FMSO Code 91423, the QDR System required some degree of security. There are basically two levels of security available for the system. The first level of security is the protection of the System Disks. The Master Network Station is the gateway to the QDR

Programs and Data Files. By keeping the master station operating disks under lock and key, the system is not generally accessible to unauthorized personnel. Access to these disks should be controlled by the system supervisor or his assistant supervisor.

The second level of security involves a logon and password system incorporated into the QDR Software. Each authorized user is provided a unique user identification code which will allow him access to the system. In addition to the required I.D. Code, a password is required to complete the logon procedure. The passwords may and should be changed periodically by the system supervisor to reduce the likelyhood of unauthorized personnel becoming familiar with the passwords. To utilize the QDR System, the user accesses the system as described in the section on user interface. The user is given three attempts to access the System. If all three access attempts fail, the system will display an "Illegal Access Attempt" message and will lockout the terminal. The only way to return a locked terminal to an operational mode is to "reboot" the affected terminal.

Although this method of security is simplistic, it is the method most suitable for a system of this nature. As the value of the data held by the system increases, the security procedures should be reviewed to ensure they are adequate.

4. Flexibility And Maintenance

The fact that the QDR System could expect to undergo changes was considered in not only program development, but also in the database organization. Flexibility and maintainability of the entire system represented development objectives in order to support the earlier discussed design goals of modularity and information hiding.

DBASE II with its command language and relational database provided a powerful vehicle to construct the programs and databases for the system. The English-like quality of the command language provides the programmers a sense of code function over and above relying on algorithm inspection alone. Comments were spread throughout the program listing where they would assist understanding of specific portions of the processing, especially in QUERY and XDBHNDLR (See Appendix D for a complete set of CDR System Program Listings). Additionally, comments were provided in the program headers to identify critical information. Variables passed between the module of interest and all other modules as well as a list of subordinate and superordinate modules were provided. Maintenance of the programs could then be conducted with a knowledge of the current interface between the modules.

The structured programming technique of indentation was used to enhance readability and understandability of the code. This provided anyone reviewing the source listings with an easy to understand view of the control structures. Each level of control was indented to identify and clarify the hierarchy of control. Each hierarchical level can thus be traced from level to level by following the indentation pattern.

In addition to the general aids to maintainability described above, some specific areas were identified for likely future changes. Internally generated change was expected from assignment of different analysts, additional or modified internal reports and standard queries. External changes were likely in the areas of Cognizance Group (COG) assignments, changing addresses of Item Managers and report modifications.

The supervisor was provided with the means to update currently authorized users and their passwords via the supervisor's main menu. The updating of COGs and Item Manager's information were also included. These were seen as routine housekeeping modifications which did not demand a programmer's attention.

If demand for specific, repetitive queries arise, the addition of this capability by maintenance programmers is very easy. Currently each analyst is able to receive a listing of each of his currently open cases as a standard query from his "report menu". To add any additional query would require modification of only one program module.

As an example, suppose that a commonly occuring query by all analysts was to receive a list of their open cases from a particular COG. The programmer would be able to provide this capability by adding only a few lines of code. The addition of a menu selection item would be accomplished by the following:

```
***** MENU ADDITION
      ' 2 - List of assigned open cases for specific COG '

***** VALIDATING ENTRY

  STORE T TO BADCOG
  DO WHILE BADCOG
      @ LINE,COLUMN SAY 'Enter COG' GET ANSWER
      READ
      USE D:COGS
      FIND ANSWER
      IF  # = 0
         @ 23,20 SAY 'COG NOT FOUND, TRY AGAIN'
      ELSE
         STORE F TO BADCOG
      ENDIF
  ENDDO <BADCOG>

***** NOW FIND THE OPEN CASES FOR THIS ANALYST
***** CHOICE OF MEDIUM WAS MADE IN ORIGINAL MENU

  USE D:OPEN1
  DISPLAY CASE,NSN,NOMEN,$(DATES,11,5) FOR COG = ANSWER
          .AND. WHO = C:WHO
```

This is but one of the many methods that could be used to provide the additional capability to the analysts.

The isolation of the functions within a single module combined with the power of a relational database are a definite asset to the programmer in extending the use of the system to its users.

While the capability to extend the functions provided has been built in, the decision to do so should not be taken without consideration of the impact on the system as a whole. An extension such as the one just described could be helpful and not be detrimental to the system operation if properly implemented. A choice would have to be made;

1. Restrict the use of this option to low use periods.
2. Implement it as a standard internal report, once a week for example.
3. Create an index file based on either COG or analyst and keep these updated during normal processing.

The supervisor must be aware of the impact of these alternatives. What in the first view looks like a very easy and useful method of producing the listings, may potentially cause system-wide problems. The two most likely drawbacks would be slowing processing response time to an unacceptable level or causing additional index files to steal precious space on the system hard disk. The first option would allow analysts to retain greatest flexibility, however it would be difficult to implement and control. The internal indexing of the databases for normal processing includes neither COG nor Analyst. For this reason a request as outlined above would require a sequential search of the OPEN1 database. A process that could take up to 30 minutes, not likely a satisfactory solution!

The second option has the advantage of being easy to control, has no impact on day to day processing or storage and meets the requirement to provide a list to each analyst. Analyst flexibility would be compromised and the required periodicity would have to be determined.

Choice number three would allow the lists to be generated upon demand. The major drawback would be the addition of an additional index that would have to be updated at each case creation, update and closing. This would add overall processing requirements and thus slow down the complete system. Additionally, the index would require space on the hard disk, a critical resource.

The proper choice for the supervisor and programmer combination would balance the users needs and the system realities. Although the above example shows a simple, easy extension it points out the necessary considerations which must be included in all decisions. The micro computer system, as well as the mainframe computer does have application limits. In the QDR System all current requirements have been met, and while designed for ease of maintenance and extendability, the latter should be implemented with discretion and caution.

B. HARDWARE

The QDR System is a combined software and hardware suite which performs management information and database management functions. The hardware selected for the system was comprised of multiple microcomputers, secondary storage devices, printers, monitors, keyboards, and network hardware with controlling software. The selection of the supporting hardware is vital to the operation of the central database system because it provides the mechanism for sharing the database files and operating programs. To meet the demands of the network operation, the hardware must be compatible and allow the equipment to be integrated into a complete system.

1. Selected Hardware

The microcomputer selected for the QDR System was the IBM-Personal Computer (PC). This provided expandability and supported both networking and relatively large hard disk storage devices. At the Naval Postgraduate School prototype site, the network was composed of four PC's. Each PC was equipped with a keyboard, a color monitor and color controller board which allowed the experimentation with color interfaces for users. All of the PC's contained two double-sided double-density 320 KByte floppy disk units with controllers and network controller boards for Orchid Technology's PCnet. Two of the four PC's had 128 KBytes of random access memory (RAM) while the other two had 320 KBytes of RAM. The 320 KB systems were also equipped with AST Research's MegaPlus board which provided 64 KB of the 320 KB RAM, a clock/calendar, a serial input/output (I/O) port, and a parallel I/O port. These I/O ports allowed the connection of either printers or modems. Two printers were connected to the network (one to each of the PCs with I/O ports). One printer provided letter quality output through its daisy wheel print, while the other provided the capability of printing text and drawing graphs through its dot matrix print.

The personal computers with the additional memory and I/O capabilities were also outfitted with interface cards for Tallgrass Technology's 20 MByte Hard Disk Storage Units. These disk units provided up to four logical disk drives and contained built-in tape backup units which allowed saving archival information.

2. Hardware Integration

The integration of the hardware was largely completed by the equipment manufacturers. The controller boards for both the network and the hard disk interfaces were specifically designed to become an integral part of the IBM-PC. The software that controlled both the hard disk and the network were created to work in conjunction with the PC-DOS operating system and with each other. The importance of this interface between the manufacturers became very apparent as system integration testing began. The initial versions of the network and hard disk software were not completely compatible. As a result, the system was prone to locking up during operations that involved large amounts of disk accessing. The respective companies worked together to solve the lockup problems and made available the corrected versions. Once the corrected versions were installed, the lockup problem appeared to be alleviated and cleared the path for the creation of the Central Database System.

3. Hardware Limitations

A limitation of the selected hardware suite is the inability for a shared PC to access files located on another shared PC. This means that the shared PCs are limited in their ability to access the total database. During the early design phases, this was not considered a problem because each record only required 275 bytes of information. Assuming a combined load of 30,000 records in the Open and Closed Database Files, the system required less than 9 Mega Bytes of storage. Under the revised QDR processing requirements, the same load of 30,000 records required over 18 MB of storage. The 18 MB requirement does not include overhead for programs, support files, or indices required by the QDR System. This meant that the Open and Closed Database Files needed to be split across two hard disk units. Since the user PCs can have access to multiple shared devices, this limitation only restricts the use of the shared PCs. By utilizing the shared PCs as network controllers only, the databases can be split across the network and accessed by all users.

C. TESTING

Testing was conducted throughout the development period of the QDR System. The testing approach used was to progress from unit testing of one module to integration of tested modules. Validation of these modules against design criteria was followed by system testing using the complete software and hardware package. [Ref. 4]

1. Unit Testing

Unit testing of modules represented the first level of testing. Once the program modules were coded and had been cleansed of any syntactical ailments, they were individually tested. Both testing harnesses and program stubs were used at different stages of program development. The top down design had identified those key modules needed to support the function of the system. The first modules coded and tested were thus the Database Handler (XDBHNDLR) and the Open Case Module (XOPEN2). Testing XDBHNDLR required development of a harness in order to input expected parameters and make available specific data to the module. The emphasis of this module was two-fold. First it was expected to be the program's interface with the case databases, and as such had to properly read and write specific files according to the "type code" presented to it. The second concern was contention. Stepwise testing of the module was conducted. A testing harness with a sample data set was used to exercise the Database Handler until it performed properly. The second testing stage was to use multiple inputs over the network to isolate any contention problems and eliminate them. Concurrently the Open Case module was undergoing parallel testing using the database directly.

2. Integration and System Testing

Integration testing was then conducted to bring together the XDBHNDIF and XOPEN2 modules. The purpose of this stage was to ensure the interface between the modules was in accordance with design. Once these programs were in this stage, the same sequence was utilized to test the other main modules, and bring them up to the integrated level.

By late October the main processing modules were integrated and the limited system was operating satisfactorily. The system re-design and development discussed earlier caused testing to begin anew. At that time the operating system version was changed from PC DOS 1.1 to PC DOS 2.0. The network and hard disk software were also upgraded.

Limited time for completion of system development and coding resulted in only partial system testing by mid January on the NPS prototype system. During demonstration at the FMSO site, the QDR system operated properly as a single user system but not with multiple simultaneous transactions over the network. The cause was not determined at that time. Orchid Technology and Tallgrass were contacted to discuss the difficulties, resulting in an updated release of both software packages being sent to NPS.

Limited system testing on the NPS network indicated that the problem had been corrected. Subsequent operation of the QDR system by personnel at FMSO (with the upgraded software) was not successful. Multiuser system failure could not be duplicated at NPS. Reasons for the network failure at FMSO have not been identified.

3. Response Times

Multiple users and large databases affect response time on micro computer systems to a large degree. Figure 3.15 shows the time required for specific operations with different system loads. Where depicted, multiple users are performing the exact same operations simultaneously.

SIZE	100 rcds			6000 rcds		
Users	1	2	3	1	2	3
OPERATION						
1. Post Case:	:26	1:15	2:25	:59	2:29	3:36
2. Case Update						
1st screen	:38	1:27	1:58	:52	1:59	2:37
2d screen	:17	:37	1:12	:24	:50	1:08
3. Case Closing	1:28	3:25	4:24	1:48	4:07	6:10

Times shown as minutes:seconds. Where time represents multiple users, the time shown is completion time for all users

Figure 3.15 Response Times.

These times give an idea of the different response the user can expect with the loadings as indicated. The difference in times used by adding a second user is not significant. However, if numerous analysts were conducting operations at the same time then the times could increase to a level where input operations would be significantly delayed. The differential in response times for added users reflects two items. The first is the contention induced for packet access to the network, which represents the main portion of the delay time. The second is a delay due to internal checking in XDBHNDLR to allow only one of the asynchronous processes access to the database. Time differences between the operations reflect the amount of data which has to be stored into the database as well as the number of different databases which must be accessed to complete the operation (2 for posting a case, 4 for closing a case).

IV. CONCLUSIONS AND RECOMMENDATIONS

A prototype system is designed to provide an interface for users and acquaint them with the potential value of an automated operation. It allows the user to see how the final system will present and accept data and provides the opportunity to modify the interface before final system implementation. Prototyping allows the rapid development of a system but generally does not contain all of the capabilities of an operational system.

The QDR System, although a prototype, was designed with capabilities beyond normal prototyping. It provides not only user interface capabilities, but also full database management capabilitiss. The additional features were added to allow the QDR System to be placed in an operational environment to be tested and to aquaint the user with automated systems and their operations. To provide functionality, the system was designed for multiple users to access the database files. This meant that the system allowed for record locking, multiple read/write operations, and security access to the system.

A. CONCLUSIONS

The design and implementation of an automated Quality Deficiency Reporting System prototype has been described in this study. A working protctype has been established and is available for future evaluation. Conclusions drawn from this develcpment include:

1. The prototype software design meets current QDR processing requirements and includes PDREP derived data elements identified for future inclusion in the QDR System.

2. There are two main operating limitations with the current system; speed of processing with multiple users and limited system capacity to meet increased QDR requirements.

3. The NPS prototype system demonstrated the feasibility of accomplishing QDR processing on a microcomputer based system.

4. If new software and hardware become available to alleviate network and database limitations, the prototype could be modified to provide an operational system.

B. RECOMMENDATIONS

1. Continue development of a microcomputer based system to provide automation of the QDR workflow.

2. Consider migration to a minicomputer or mainframe computer using the basic prototype design, in order to allow for faster response time and growth potential.

The recommendations above provide for the user to become familiar with the automation capabilities that can be implemented in the QDR processing environment. Additionally, it opens up the channels for user feedback to system designers that are working on future versions of QDR support systems. The initial design considerations that went into creating the prototype system are valid for mini/mainframe computer implementation. The data dictionary used, the menus and interface screens, and the security considerations will remain valid in both the microcomputer and mini/mainframe computer environments. The use of a higher level language in the prototype system provides the potential to directly convert the algorithms to a new system.

If it is more practical to continue utilizing the microcomputer network, the size of the database could be expanded by the use of 35 MB hard disk units, thus approximately doubling the system capacity. Additional speed for the microcomputer network could possibly be achieved by converting the file and record locking/unlocking operations into assembly or machine language routines (although this is not recommended because of future maintenance headaches). Another avenue to explore is the acquisition of a multi-user version of dBase II that was recently announced. This would allow the elimination of file locking and control currently accomplished by the QDR System software, and with a small amount of reprogramming the XDBHNDLR program could be eliminated.

The prototype QDR System provided a starting point for future growth in the QDR processing environment. The groundwork that has been laid can be utilized for either a continuation in the microcomputer realm or can be utilized with larger computers.

APPENDIX A
GLOBAL MEMORY DEFINITIONS

There are various types of memory variables utilized by the QDR System. These variables are divided into Global and Local Variables. Global Variables are used to transfer data between programs and modules and are designated by either M: or C:. Local Variables are utilized for internal control within programs. These variables are identified by U: for XUPDATE, H: for XDBHNDLR, O: for XOPEN2, etc.

The variables listed below are the Global Variables utilized by the QDR System. They are presented as:

```
 Variable Name                   Using Modules
           Description Of Variable
----------------------------------------------------------

C:JULIAN               (CLOSREC, LOGON, MENU1, XDBHNDLR,
                        XOPEN2, XUPDAT, XXBISTAT, XXMNSTAT)

MEMORY VARIABLE WHICH HOLDS TODAYS JULIAN DATE.  THIS DATE
IS GENERATED BY ACCESSING THE SYSTEM CALANDER AND CONVERTING
TO A JULIAN DATE.


C:WHC                  (CLOSREC, COGCNT, C-REASGN, DEPACK,
                        LOGON, MENU1, OCASERPT, QUERY,
                        RPTMENU, STATGEN, SUPMENU1, SUPRPTS,
                        SUPRPT2, UTILMENU, UTILNDX, XDBHNDLR,
                        XOPEN2, XUPDAT, XXBISTAT, XXMNSTAT)

MEMORY VARIABLE THAT HOLD THE LOGON IDENTIFICATION OF THE
ANALYST.  THIS IS CAPTURED DURING THE LOGON PROCESS.


M:ACTDISP              (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE ACTION/DISPOSITION
INSTRUCTIONS.  ORIGINALLY CAPTURED FROM BLOCK 21 OF THE
SF 368.


M:ACTPT                (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE ACTION POINT.
```

M:ACTTKN (XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE ACTION CODE. ORIGINALLY CAPTURED FROM BLOCK 21 OF THE SF 368.

M:CASE (CLOSREC, C-REASGN, XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE USED TO CAPTURE THE NUMBER OF THE QDR CASE.

M:CAT (C-REASGN, XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE CLASS OF THE QDR CASE. CASES MAY BE EITHER CATEGORY 1 (HIGH PRIORITY) OR CATEGORY 2 (NORMAL PRIORITY). ORIGINALLY CAPTURED FROM THE SF 368 OR QDR MESSAGE.

M:CAUSEC (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE CAUSE CODE.

M:CCOST (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE ESTIMATED CORRECTION COST. ORIGINALLY CAPTURED FROM BLOCK 18 OF SF 368.

M:CLOSE (CLOSREC, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE DATE THE CASE WAS CLOSED. ORIGINALLY ENTERED UPON CLOSING THE CASE.

M:COG (C-REASGN, XDBHNDLR, XOPEN2, XUPDAT, XXBISTAT)

MEMORY VARIABLE WHICH HOLDS THE COGNIZANCE SYMBOL FOR THE ASSOCIATED NSN. ORIGINALLY CAPTURED FROM BLOCK 5 OF THE SF 368.

M:COSTC (XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE COST CODE.

M:CR (CLOSREC, XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE CREDIT CODE.

M:DATES (CLOSREC, C-REASGN, XDBHNDLR, XOPEN2, XUPDAT, XXBISTAT, XXMNSTAT)

MEMORY VARIABLE WHICH HOLDS THE CONCATINATION OF THE MAJOR DATES ASSOCIATED WITH THE QDR SYSTEM.

M:DEF (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE TYPE DEFECT CODE.

M:DEFR (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE DEFECT RESPONSIBILITY CODE.

M:DEFV (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE DEFECT VERIFICATION CODE.

M:DETAILS (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE DETAILS OF THE QDR. ORIGINALLY CAPTURED FROM BLOCK 22 OF THE SF 368.

M:DIS (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE DISCOVERY CODE. ORIGINALLY CAPTURED FROM BLOCK 22 OF THE SF 368.

M:DITEM (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH CONCATENATES MODEL, SERIAL NUMBER OF DEFICIENT PART, NEXT HIGHER ASSEMBLY, AND SUB ASSEMBLY. ORIGINALLY CAPTURED FROM BLOCK 16 OF SF 368.

M:DOC (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE TYPE DOCUMENT. ORIGINALLY CAPTURED FROM BLOCK 30 OF THE SF 368.

M:DOCNO (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE DOCUMENT NUMBER. ORIGINALLY CAPTURED FROM BLOCK 10 OF THE SF 368.

M:EPRC (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE EXTENDED PRICE OF THE DEFICIENT MATERIAL. THE EXTENDED PRICE IS CALCULATED BY MULTIPLYING THE QUANTITY DEFICIENT BY THE UNIT PRICE.

M:FSCM (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE FEDERAL SUPPLY CODE OF MANFACTURER. ORIGINALLY CAPTURED FROM BLOCK 7 OF THE SF 368.

M:GOV (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES GOVERNMENT FURNISHED MATERIAL. ORIGINALLY CAPTURED FROM BLOCK 14 OF THE SF 368.

M:ITEM (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THAT THE ITEM IS NEW OF A REPAIR/OVERHAUL ITEM. ORIGINALLY CAPTURED FROM BLOCK 11 OF THE SF 368.

M:KEY (CLOSREC, C-REASGN, XDBHNDLR, XOPEN2)

MEMORY VARIABLE WHICH CONTAINS THE DATABASE ACCESS KEY.

M:LDATE (CLOSREC, XOPEN2)

MEMORY VARIABLE WHICH HOLDS THE DATE THE CASE WAS TRANSMITTED TO THE ITEM MANAGER. ORIGINALLY ENTERED UPON TRANSMISSION OF THE CASE.

M:LOT (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE MANUFACTURERS LOT NUMBER. ORIGINALLY CAPTURED FROM BLOCK 16B(3) OF SF 368.

M:MFG (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE MANUFACTURERS PART NUMBER. ORIGINALLY CAPTURED FROM BLOCK 16B(3) OF SF 368.

M:NOMEN (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE NOMENCLATURE OF THE MATERIAL BEING REPORTED IN THE QDR. ORIGINALLY CAPTURED FROM BLOCK 6 OF THE SF 368.

M:NSN (C-REASGN, XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE NATIONAL STOCK NUMBER. ORIGINALLY CAPTURED FROM BLOCK 5 OF SF 368.

M:NUM (XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE CONTRACT NUMBER UNDER WHICH THE REPORTED MATERIAL WAS RECEIVED. ORIGINALLY CAPTURED FROM BLOCK 10 OF THE SF 368.

M:O9Q (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE GSA REGION CODE FOR 9Q ITEMS.

M:OPEN (CLOSREC, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE DATE THE CASE WAS OPENED. ORIGINALLY ENTERED BY THE SYSTEM UPON NEW CASE INPUT.

M:ORG (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE ORIGIN CODE.

M:OTF (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE OPERATING TIME AT FAILURE. ORIGINALLY CAPTURED FROM BLOCK 13 OF THE SF 368.

M:OVER (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE DATE OF MANUFACTURE/ OVERHAUL. ORIGINALLY CAPTURED FROM BLOCK 12 OF THE SF 368.

M:QTYDEF (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE QUANTITY OF MATERIAL REPORTED AS DEFICIENT. ORIGINALLY CAPTURED FROM BLOCK 15C OF THE SF 368.

M:QTYINS (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE QUANTITY OF MATERIAL INSPECTED BY THE REPORTING ACTIVITY. ORIGINALLY CAPTURED FROM BLOCK 15B OF THE SF 368.

M:QTYREC (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE QUANTITY OF MATERIAL RECEIVED BY THE REPORTING ACTIVITY. ORIGINALLY CAPTURED FROM BLOCK 15A OF THE SF 368.

M:QTYSTK (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE QUANTITY OF MATERIAL IN STOCK AT THE REPORTING ACTIVITY WHEN THE QDR WAS SUBMITTED. ORIGINALLY CAPTURED FROM BLOCK 15D OF THE SF 368.

M:RDATE (CLOSREC, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE DATE RECEIVED FROM ORIGIN. ORIGINALLY CAPTURED FROM THE MAILROOM TIMESTAMP ON RECEIPT DATE.

M:REC1 (CLOSREC, XDBHNDLR, XOPEN2)

MEMORY VARIABLE WHICH IDENTIFIES THE RECORD NUMBER OF THE RECORD BEING PROCESSED. THIS IS A SYSTEM GENERATED VARIABLE.

M:REOPEN (CLOSREC, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE DATE A CLOSED CASE IS REOPENED. ORIGINALLY ENTERED UPON REOPENING A CLOSED CASE.

M:REPCON (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE REPORT CONTROL NUMBER. ORIGINALLY CAPTURED FROM BLOCK 3 OF THE SF 368.

M:REPLY (XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE REPLY RECEIVED FROM THE ITEM MANAGER. ORIGINALLY CAPTURED FROM BLOCK 32 OF THE SF 368.

M:RETC (XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE RETURN CODE OF THE QDR.

M:RIMDATE (CLOSREC, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE DATE RETURNED FROM THE ITEM MANAGER. ORIGINALLY ENTERED UPON RECEIPT OF A RESPONSE FROM THE ITEM MANAGER.

M:SCR (XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE SCREENING CODE.

M:SCRQTY (XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE SCREENING QUANTITY.

M:SM (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE SUPPLY MANAGEMENT INFORMATION CODE. ORIGINALLY CAPTURED FROM BLOCK 5 OF THE SF 368.

M:STATUSC (XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE STATUS CODE.

M:TIME (LOGON, XDBHNDLR, XOPEN2)

MEMORY VARIABLE WHICH HOLDS THE TIMESTAMP. THIS IS A SYSTEM VARIABLE USED TO LOCK INDIVIDUAL RECORDS.

M:TYPE (CLOSREC, C-REASGN, XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE CODE SPECIFYING THE DATABASE HANDLER ACCESS CODE.

M:UI (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE UNIT OF ISSUE FOR THE REPORTED MATERIAL. ORIGINALLY CAPTURED FROM THE ML-N BASED ON THE NSN BEING REPORTED.

M:UIC (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE UNIT IDENTIFICATION CODE OF THE ACTIVITY SUBMITTING THE QDR. ORIGINALLY CAPTURED FROM BLOCK 1A OF THE SF 368.

M:UPRC (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH HOLDS THE UNIT PRICE FOR THE REPORTED MATERIAL. ORIGINALLY CAPTURED FROM THE ML-N BASED ON THE REPORTED NSN.

M:VLC (CLOSREC, XDBHNDLR, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE VENDOR LIABILITY CODE.

M:WHO (C-REASGN, XDBHNDLR)

MEMORY VARIABLE WHICH IDENTIFIES THE INDIVIDUAL CREATING THE RECORD. THIS IS A SYSTEM VARIABLE WHICH IS CAPTURED FROM THE SYSTEM LOGON.

M:WNTY (XOPEN2, XUPDAT, XDBHNDLR)

MEMORY VARIABLE WHICH IDENTIFIES THE WARRANTY STATUS OF THE ITEM. ORIGINALLY CAPTURED FROM BLOCK 19 OF SF 368.

M:WUC (XDBHNDLR, XOPEN2, XUPDAT)

MEMORY VARIABLE WHICH IDENTIFIES THE WORK UNIT CODE. ORIGINALLY CAPTURED FROM BLOCK 20 OF THE SF 368.

APPENDIX B

QDR DATABASE FILE STRUCTURES

```
        STRUCTURE FOR FILE:   D:OPEN1    .DBF

FLD          NAME        TYPE          WIDTH         DEC

001          CASE         C             007
002          CCG          C             002
003          NSN          C             013
004          CAT          C             001
005          NCMEN        C             019
006          UIC          C             006
007          UI           C             002
008          QTYDEF       N             006
009          UPRC         N             009           002
010          EPRC         N             012           002
011          ORG          C             003
012          DCC          C             001
013          DCCNO        C             014
014          DATES        C             046
015          REPCON       C             012
016          FSCM         C             006
017          TIME         C             011
018          WHO          C             004
019          NUM          C             017
020          CR           C             001
021          SCR          C             003
022          SM           C             002
023          OSQ          C             001
024          DEF          C             002
025          VIC          C             001
026          ACTPT        C             011
027          SCRQTY       N             006
** TOTAL **          00219    BYTES

        STRUCTURE FOR FILE:   D:OPEN2    .DBF

FLD          NAME        TYPE          WIDTH         DEC

001          CASE         C             007
002          QTYINS       N             006
003          QTYREC       N             006
004          QTYSTK       N             006
005          DEFV         C             001
006          DEFR         C             001
007          ITEM         C             001
008          OVER         C             005
009          OTF          C             005
010          GCV          C             001
011          TIME         C             011
012          WHO          C             004
013          DITEM        C             035
014          CCOST        N             012           002
C15          WNTY         C             001
016          WUC          C             007
017          DIS          C             002
```

```
018        DETAILS     C          120
019        REPLY       C          120
020        ACTTKN      C          003
021        COSTC       C          001
022        STATUSC     C          002
023        CAUSEC      C          001
024        RETC        C          001
025        ACTDISP     C          001
026        MFG         C          016
027        LOT         C          009
** TOTAL **                 00386  BYTES


          STRUCTURE FOR FILE:  D:CLOSE1   .DBF

FLD        NAME        TYPE       WIDTH      DEC

001        CASE        C          007
002        CCG         C          002
003        NSN         C          013
004        CAT         C          001
005        NOMEN       C          019
006        UIC         C          006
007        UI          C          002
008        QTYDEF      N          006
009        UPRC        N          009        002
010        EPRC        N          012        002
011        ORG         C          003
012        DOC         C          001
013        DOCNO       C          014
014        DATES       C          046
015        REPCON      C          012
016        FSCM        C          006
017        TIME        C          011
018        WHO         C          004
019        NUM         C          017
020        CR          C          001
021        SCR         C          003
022        SM          C          002
023        09Q         C          001
024        DEF         C          002
025        VIC         C          001
026        ACTPT       C          011
027        SCRQTY      N          006
** TOTAL **                 00219  BYTES


          STRUCTURE FOR FILE:  D:CLOSE2   .DBF

FLD        NAME        TYPE       WIDTH      DEC

001        CASE        C          007
002        QTYINS      N          006
003        QTYREC      N          006
004        QTYSTK      N          006
005        DEFV        C          001
006        DEFR        C          001
007        ITEM        C          001
008        OVER        C          005
009        CTF         C          005
010        GOV         C          001
011        TIME        C          011
```

```
012          WHO          C            004
013          DITEM        C            035
014          CCOST        N            012          002
015          WNTY         C            001
016          WUC          C            007
017          DIS          C            002
018          DETAILS      C            120
019          REPLY        C            120
020          ACTTKN       C            003
021          CCSTC        C            001
022          STATUSC      C            002
023          CAUSEC       C            001
024          RETC         C            001
025          ACTDISP      C            001
026          MFG          C            016
027          LCT          C            009
** TOTAL **                   00386  BYTES


        STRUCTURE FOR FILE:  D:COG      .DBF

FLD          NAME         TYPE         WIDTH        DEC

001          COG          C            002
002          IM           C            007
003          CCUN         N            004
** TOTAL **                   00014  BYTES


        STRUCTURE FOR FILE:  D:TECHCODE.DBF

FLD          NAME         TYPE         WIDTH        DEC

001          NAME         C            020
002          TECHCODE     C            004
003          PSWD         C            008
004          LOGGED       C            001
005          ASSIGNED     N            004
006          ACTIVE       N            004
007          TRANSMIT     N            004
008          RESPOND      N            004
009          CLOSED       N            004
** TOTAL **                   00054  BYTES


        STRUCTURE FOR FILE:  D:ADDRESS .DBF

FLD          NAME         TYPE         WIDTH        DEC

001          IM           C            007
002          TITLE        C            018
003          COMMAND      C            040
004          COMMAND2     C            040
005          ATTN         C            015
006          STREET       C            020
007          CITY         C            020
008          STATE        C            002
009          ZIP          C            005
010          CCUNT        N            004
```

```
** TOTAL **                00172  BYTES


          STRUCTURE FOR FILE:  D:WHERDIS .DBF

FLD       NAME      TYPE          WIDTH          DEC

001       CODE       C             002
002       TEXT       C             020

** TOTAL **                00023 BYTES


          STRUCTURE FOR FILE:  D:FILESTAT.DBF

FLD       NAME      TYPE          WIDTH          DEC

001       OPEN1      C             004
002       OPEN2      C             004
003       CLOSE1     C             004
004       CLOSE2     C             004

** TOTAL **                00017 BYTES


          STRUCTURE FOR FILE:  D:BIWKSTAT.DBF

FLD       NAME      TYPE          WIDTH          DEC

001       YEAR       C             004
002       TOTALS     N             005
003       LAST       C             005

** TOTAL **                00015 BYTES
```

APPENDIX C

DATA ELEMENT DEFINITIONS

This provides a list of the Data Element pictures that are used in various QDR programs. The column labeled "Data Element" contains a short description of the actual Element that the Variable represents. The column "ID" contains the variable name associated with the Data Element. The ID is further defined in Appendix A. The "Type" is either character "C" or numeric "N", with a length as shown. The "Picture" shows the size and character type of each Data Element. Standard representations are used:

'A' - Alphabetic
'9' - Numeric, 0-9
'X' - Either numeric or alphabetic

Data Element	ID	Picture	Type
Case Number	M:CASE	'999999A'	A7
Cognizance	M:CCG	'XX'	A2
Category	M:CAT	'9'	A1
Nomenclature	M:NOMEN	'XXX...XX'	A19
UIC	M:UIC	'AXXXXX'	A6
Unit of issue	M:UI	'AA'	A2
Unit Price	M:UPRC	'999999.99'	N9
Quantity Def.	M:QTYDEF	'999999'	N6
Quantity Insp.	M:QTYINS	'999999'	N6
Quantity Recvd	M:QTYREC	'999999'	N6
Qty in Stock	M:QTYSTK	'999999'	N6
Extended Price	M:EPRC	'999999999.99'	N12
Origin	M:ORG	'XXX'	A3
Deficiency Ver	M:DEFV	'A'	A1
Deficiency Resp	M:DEFR	'A'	A1
Type Document	M:DOC	'9'	A1
Discovery Date	M:DDATE	'99999'	A5
Date Rcvd fm Org	M:RDATE	'99999'	A5
Open Date	M:OPEN	'99999'	A5
Date Ltr Typed	M:LDATE	'99999'	A5
Screen Rpt Date	M:SCRDAT	'99999'	A5
Interim Resp Dat	M:IRDATE	'99999'	A5
Date rtn fm IM	M:RIMDAT	'99999'	A5
Close Date	M:CLOSE	'99999'	A5
Reopen Date	M:REOPEN	'99999'	A5
Dates concat'ned	M:DATES	See note 1	A46
Date change ID	M:DATECI	'X' See note 2	A1
Report Control #	M:REPCON	See note 3	A12
Document Number	M:DOCNO	See note 4	A14
FSCM	M:FSCM	'XXXXXX'	A6
Time Stamp	M:TIME	'99999999999'	A11
Analyst Code	M:WHC	'XXXX'	A4
New-Repair/Ovhl	M:ITEM	'A'	A1
Date Mfg/Ovhl	M:OVER	'99999'	A5
Opn Time-Failure	M:OTF	'A9999'	A5
Govnment Furnish	M:GOV	'X'	A1
Work Unit Code	M:WUC	'XXXXXXX'	A7

Discovery Code	M:DIS	'AA'	A2
Details Section	M:DETAILS	'XX...198..X'	A198
Return Code	M:RETC	'9'	A1
Record Variable	M:REC1	'99999A'	A6
Contract Number	M:NUM	See note 5	A17
Credit Code	M:CR	'A'	A1
Screening Code	M:SCR	'XXX'	A3
Reply Section	M:REPLY	'XX..198..X'	A198
Action Code	M:ACITKN	'AAA'	A3
Cost Code	M:CCSTC	'A'	A1
Status Code	M:STATUSC	'AA'	A2
Cause Code	M:CAUSEC	'A'	A1
Action Disp'n	M:ACTDISP	'A'	A1
SMIC	M:SM	'AX'	A2
9Q Region Code	M:09Q	'X'	A1
Type Defect	M:DEF	'99'	A2
Vendor Liab Code	M:VIC	'A'	A1
Action Point	M:ACTPT	'AXXXXX99999'	A11
Part Number	M:MFG	'XX..16..XX'	A16
Lot/ser/batch	M:LOT	'XXXXXXXXX'	A9
NSN	M:NSN	See note 6	A13
Type/Model/Ser	O:MODEL	'XXXXXXX'	A7
Def Item Ser #	O:DEFSER	'XXXXXX'	A6
Higher Assy	O:HASSY	'XXXXXXXXXX'	A10
Sub assembly	O:SASSY	'XXXXXXXXXXXX'	A12
Def Item	M:DITEM	'XXXX 35 XXXX'	A35
Est Corr Cost	M:CCCST	'999999999.99	N12
Warranty	M:WNTY	'A'	A1
Screen Quantity	M:SCRQTY	'999999'	N6

NOTES:

1. All dates, followed by M:DATECI, are concatenated into the variable M:DATES for storage into the databases. This is necessary to minimize the number of variables active in the CDR programs, and due to the 32 field limit per database.
2. This variable is the last field in M:DATES. Values are either a blank, "N", or "*". "N" depicts a newly formed case that has not been accounted for in the statistics. A "*" shows that a date was changed during a case update. These are blanked after statistics are calculated.
3. Report Control Number (RCN) 'XXXXXX-99-9999'
4. M:DOCNO PICTURE 'XXXXXX-9999-9999'
5. Contract number picture 'XXXXXX-99-A-9999-9999'
6. NSN (FSC+NATO+FIIN) '9999-XX-XXX-9999'

APPENDIX D

QDR PROGRAMS

I. LOGON MODULE

```
************************************************************
**                                                        **
**   Date: 23 Nov 1983                                    **
**   Version: 1.0                                         **
**   Module Name: LOGON                                   **
**   Module Purpose: Provide Password Logon Facilities    **
**                   for the QDR System                   **
**                                                        **
**   Module Interface Definition                          **
**      Inputs: None                                      **
**      Outputs: C:JULIAN, C:WHO                          **
**                                                        **
**   Module Processing Narrative Description:             **
**         Accepts The Password From The Operator, Val-   **
**         idates The Password, and Calls The Necessary   **
**         Modules                                        **
**                                                        **
**   Superordinate Modules: None                          **
**   Subordinate Modules: SUPMENU1, MENU1, LOCKOUT        **
**   Author: R. G. NICHOLS                                **
**                                                        **
************************************************************

SET TALK OFF
SET BELL OFF
SET COLOR TO 112,3
SET EXACT ON
SET COLON OFF
STORE T TO V:CONTINUE

*****  Accept ID of Person Logging On To The System

DO WHILE V:CONTINUE
   ERASE
   STORE '     ' TO C:WHO
   @ 10,29 SAY 'ENTER YOUR ACCESS I.D.'
   @ 11,37 GET C:WHO
   READ
   STORE !(C:WHO) TO C:WHO
   IF C:WHO = 'QUIT'
      QUIT
   ENDIF

*****  Validate ID To See If A Valid User Is Logging On

   USE D:TECHCODE INDEX D:TECH
   FIND &C:WHO
   DO WHILE # = 0
      @ 13,28 SAY 'ACCESS I.D. NOT ON FILE'
      @ 14,33 SAY 'PLEASE REENTER'
      STORE '     ' TO C:WHO
      @ 11,37 GET C:WHO
      READ
      STORE !(C:WHO) TO C:WHO
      IF C:WHO = 'QUIT'
         QUIT
      ENDIF
      FIND &C:WHO
   ENDDO
   STORE F TO V:LOGGED
```

```
*****  Check To See If Previously Logged On

   IF LOGGED <> ' '
      @ 16,28 SAY 'USER CURRENTLY LOGGED ON'
      @ 17,32 SAY 'LOGON TERMINATED'
      @ 23,0  SAY ' '
      STORE T TO V:LOGGED
   ENDIF

***** Allow Three Attempts to Enter The Correct Password

   IF .NOT. V:LOGGED
      STORE 2 TO V:ATTEMPTS
      @ 16,30 SAY 'ENTER YOUR PASSWORD'
      @ 17,30 SAY ' FOLLOWED BY <CR>'
      SET CONSOLE OFF
      @ 19,35 SAY ' '
      STORE T TO V:TRUE
      DO WHILE V:TRUE
         STORE '         ' TO V:PSWD
         ACCEPT TO V:PSWD
         IF V:ATTEMPTS = 0 .AND. PSWD <> V:PSWD
            SET CONSOLE ON

*****  If Three Unsuccessful Passwords Are Entered, Call
*****  For System Lockup Program

            DO C:LOCKOUT
         ELSE
            IF PSWD <> V:PSWD
               STORE V:ATTEMPTS-1 TO V:ATTEMPTS
               @ 21,27 SAY 'INCORRECT PASSWORD ENTERED'
               @ 19,35 SAY ' '+ CHR(7)
            ELSE
               STORE F TO V:TRUE
            ENDIF
         ENDIF
      ENDDO
      SET CONSOLE ON
      REPL LOGGED WITH '*'
      USE
      SET EXACT OFF
      RELEASE ALL LIKE V:*

*****  If Either Supervisor is Logging On The System Call
*****  For Supervisor Menu To Be Displayed Otherwise
*****  Display General User Menu

      IF C:WHO ='0000' .OR. C:WHO='0001'
         DO C:SUPMENU1
      ELSE
         DO C:MENU1
      ENDIF

      STORE T TO V:CONTINUE

*****  Allow The Logged User To Logoff

      USE D:TECHCODE INDEX D:TECH
      FIND &C:WHO
      IF # = 0
         ERASE
         @ 10,32 SAY 'LOG OFF FAILURE'+CHR(7)
         @ 11,27 SAY 'CONTACT SYSTEM SUPERVISOR'
         @ 23,26 SAY 'STRIKE ANY KEY TO CONTINUE '
         WAIT
      ELSE
         REPL LOGGED WITH ' '
         USE
```

```
*****  Clear The Screen, Read The Clock And Display The
*****  Logged Off Message and The Time

          ERASE
          STORE " " TO V:DUMMY
          POKE 61440, 180, 44, 205, 33, 137, 22, 13, 240,;
                      137, 14, 15, 240, 195
          SET CALL TO 61440
          CALL V:DUMMY
          STORE STR(PEEK(61456),2) TO V:HOUR
          STORE STR(PEEK(61455),2) TO V:MIN
          STORE STR(PEEK(61454),2) TO V:SEC
          IF $(V:HOUR,1,1)=" "
             STORE "0" +$(V:HOUR,2,1) TO V:HOUR
          ENDIF
          IF $(V:MIN,1,1)=" "
             STORE "0"+$(V:MIN,2,1) TO V:MIN
          ENDIF
          IF $(V:SEC,1,1)=" "
             STORE "0"+$(V:SEC,2,1) TO V:SEC
          ENDIF
          STORE V:HOUR +":"+V:MIN+":"+V:SEC TO M:TIME
          @  8,30 SAY 'LOG OFF COMPLETED AT'
          @ 10,36 SAY M:TIME
          RELEASE ALL
          STORE T TO V:CONTINUE
       ENDIF
    ENDIF
    @ 22,28 SAY 'PRESS ANY KEY TO CONTINUE '
    WAIT
    USE
ENDDO

***** NOTE:  This Program Will Continue To Accept Logons
*****        Until The Quit Command Is Entered

***** END OF PROGRAM
```

II. LOCKOUT

```
****************************************************************
**                                                            **
**   Date: 23 Nov 1983                                        **
**   Version: 1.0                                             **
**   Module Name: LOCKOUT                                     **
**   Module Purpose: To Lock The System After An Illegal      **
**                   Logon Attempt                            **
**                                                            **
**   Module Interface Definition                              **
**      Inputs: None                                          **
**      Outputs: None                                         **
**                                                            **
**   Module Processing Narrative Description:                 **
**         This Program Will Display An Illegal Logon         **
**         Message and Will Sound The Buzzer                  **
**                                                            **
**   Superordinate Modules: LOGON                             **
**   Subordinate Modules: None                                **
**   Author: R. G. NICHOLS                                    **
**                                                            **
****************************************************************

SET TALK OFF
SET COLOR TO 4,4
STORE T TO V:CONTINUE
STORE T TO V:TOGGLE

*****  Clear The Screen and Display The Illegal Access
*****  Message

ERASE
DO WHILE V:CONTINUE
   STORE 5 TO V:INNER
   DO WHILE V:INNER > 0
      IF V:TOGGLE
         @ 10,29 SAY 'ILLEGAL ACCESS ATTEMPT'
         @ 21, 0 SAY ' ' + CHR(7)
      ELSE
         @ 10,29 SAY '                      '
         @ 21, 0 SAY ' '
      ENDIF
      STORE V:INNER-1 TO V:INNER
   ENDDO
   IF V:TOGGLE
      STORE F TO V:TOGGLE
   ELSE
      STORE T TO V:TOGGLE
   ENDIF
ENDDO

***** NOTE: The System Must Be Rebooted To Exit From
*****          An Illegal Access Attempt

***** END OF PROGRAM
```

III. MAIN PROCESSING MODULE

```
*************************************************************
**                                                         **
**   DATE: 15 NOVEMBER 1983                                **
**   VERSICN: 1.0                                          **
**   MODULE NAME: MENU1                                    **
**   MODULE PURPOSE: PROVIDE THE USER A MENU OF ALL        **
**          PROCESSING OPTIONS AVAILABLE TO HIM/HER IN     **
**          THE QDR SYSTEM.                                **
**   MODULE INTERFACE DEFINITION                           **
**      INPUTS: C:WHO                                      **
**      OUTPUTS: C:JULIAN                                  **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:              **
**                                                         **
**          DISPLAYS ALL PROCESSING OPTIONS AVAILABLE TO   **
**          THE USER. UPON USER SELECTION, CALLS THE       **
**          APPROPRIATE MODULE FOR CONTINUED PROCESSING    **
**          ALLOWS USER TO EXIT FROM THE QDR SYSTEM.       **
**                                                         **
**   SUPERORDINATE MODULES: LOGON                          **
**   SUBORDINATE MODULES: OPEN,CLOSE,UPDAT,LTR,RPTMENU,    **
**                        QUERY                            **
**   AUTHOR: J.G. BOYNTON & R.G. NICHOLS                   **
**                                                         **
*************************************************************

***** THIS SECTICN ACCESSES THE SYSTEM DATE

STORE   TO V:DUMMY
POKE 61440, 180, 42, 205, 33, 137, 22, 13, 240, 137,;
     14, 15, 240, 195
SET CALL TO 61440
CALL V:DUMMY
STORE PEEK(61454) TO V:MM
STORE PEEK(61453) TO V:DD
STORE PEEK(61456)*256+PEEK(61455)-1900 TO V:YY

***** THIS SECTICN CCNVERTS THE SYSTEM DATE TO A JULIAN DATE

DO CASE
   CASE V:MM = 01
      STCRE V:DD TO V:DAY
   CASE V:MM = 02
      STCRE V:DD + 31 TO V:DAY
   CASE V:MM = 03
      STCRE V:DD + 59 TO V:DAY
   CASE V:MM = 04
      STCRE V:DD + 90 TO V:DAY
   CASE V:MM = 05
      STCRE V:DD + 120 TO V:DAY
   CASE V:MM = 06
      STCRE V:DD + 151 TO V:DAY
   CASE V:MM = 07
      STCRE V:DD + 181 TO V:DAY
   CASE V:MM = 08
      STCRE V:DD + 212 TO V:DAY
   CASE V:MM = 09
      STCRE V:DD + 243 TO V:DAY
   CASE V:MM = 10
      STCRE V:DD + 273 TO V:DAY
   CASE V:MM = 11
      STCRE V:DD + 304 TO V:DAY
   CASE V:MM = 12
      STORE V:DD + 334 TO V:DAY
ENDCASE
IF INT(V:YY/4)*4 = V:YY .AND. V:DAY >= 60
   IF V:MM= 02 .AND. V:DD= 29
     STORE V:DAY TO V:DAY
   ELSE
     STORE V:DAY + 1 TO V:DAY
   ENDIF
ENDIF
STORE V:YY * 1000 + V:DAY TO V:JULIAN
STORE STR(V:JULIAN,5) TO C:JULIAN
RELEASE ALL EXCEPT C:*

STORE T TO V:CONTINUE
DO WHILE V:CONTINUE
ERASE
SET TALK OFF
STORE ' ' TO V:CHOICE
TEXT


             WELCOME TO THE QDR AUTOMATED TRACKING SYSTEM

                     1 - OPEN NEW RECORD
                     2 - CLOSE RECORD
                     3 - UPDATE RECORD
                     4 - ORIGINATE LETTER
                     5 - REPORT GENERATION
                     6 - QUERY
                     7 - EXIT FROM THE SYSTEM

                     ENTER YOUR CHOICE

ENDTEXT
@ 19,30 GET V:CHOICE
READ
?
IF   V:CHOICE >= 1 .AND. V:CHOICE <= 7

?
     DO CASE
         CASE V:CHOICE= 1
              RELEASE ALL EXCEPT C:*
              DO C:XOPEN2.PRG
         CASE V:CHOICE= 2
              RELEASE ALL EXCEPT C:*
              DO C:CLOSREC.PRG
         CASE V:CHOICE= 3
              RELEASE ALL EXCEPT C:*
              DO C:XUPDAT.PRG
         CASE V:CHOICE= 4
              RELEASE ALL EXCEPT C:*
              DO C:LTR.PRG
         CASE V:CHOICE= 5
              RELEASE ALL EXCEPT C:*
              DO C:RPTMENU
         CASE V:CHOICE=6
              RELEASE ALL EXCEPT C:*
              DO C:QUERY.PRG
         CASE V:CHOICE=7
              RELEASE ALL EXCEPT C:*
              RETURN
     ENDCASE
```

```
          STORE T TO V:CONTINUE
          STORE ' ' TO V:CHOICE
ELSE
    @ 21,20 SAY ' < PLEASE ANSWER WITH  1 - 7 ONLY >'
    @ 23,20 SAY '<PRESS ANY KEY TO CONTINUE>'
    WAIT
ENDIF <V:CHCICE>

ENDDO <V:CONTINUE>

***** END OF PROGRAM
```

IV. NEW CASE INPUT MODULE

```
***********************************************************
**                                                       **
**   DATE: 18 NOV 1983                                   **
**   VERSION: 1.0                                        **
**   MODULE NAME: OPEN                                   **
**   MODULE PURPOSE: NEW QDR CASE CREATION               **
**   MODULE INTERFACE DEFINITION                         **
**      INPUTS: C:WHO, C:JULIAN, V:JULDATE               **
**      OUTPUTS: M:CASE, V:MM, V:DD, V:YY, AND ALL OF THE **
**               DATA ELEMENTS IN OPEN1 AND OPEN2.       **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:            **
**                                                       **
**         PROMPTS THE USER FOR INPUT OF ALL DATA FROM   **
**         SF 368 IN ORDER TO CREATE A NEW QDR CASE.     **
**         VALIDATION OF DATA ITEMS OCCURS UPON INPUT AND **
**         IS BASED UPON CURRENT GE TIMESHARE VALIDATION, **
**         AS MODIFIED BY FMSO TECHNICAL BRANCH. DATES   **
**         ARE CAPTURED FOR MANAGEMENT STATISTICS.       **
**                                                       **
**   SUPERORDINATE MODULES: MENU1                        **
**   SUBORDINATE MODULES: OJULIAN, XDBHNDLR              **
**   AUTHOR: J.G. BOYNTON                                **
**                                                       **
***********************************************************

STORE T TO C:TRUE
DO WHILE O:TRUE
ERASE
  STORE ' 'TO O:CHOICE
  TEXT
                          ***** OPEN NEW CASE *****


                     THIS PROGRAM ENABLES YOU TO OPEN A

                                NEW QDR CASE



                            1 - CONTINUE

                            2 - RETURN TO MENU
  ENDTEXT
  @ 20,30 SAY ' ' GET O:CHOICE
  READ
  DO WHILE C:CHOICE <> '1' .AND. O:CHOICE <> '2'
      @ 23,20 SAY 'ANSWER WITH A 1 OR 2 ONLY'
      @ 20,30 SAY ' ' GET O:CHOICE
      READ
  ENDDO
  ERASE
  IF C:CHOICE = '2'
     RELEASE ALL EXCEPT C:*
     RETURN
  ENDIF

***** INITIALIZE MEMORY VARIABLES

     STORE '                    ' TO O:KEY
```

```
    STORE '         'TO M:CASE
    STORE '  ' TO M:COG
    STORE '  ' TO M:SM
    STORE ' ' TO M:CAT
    STORE '                   ' TO M:NOMEN
    STORE '      ' TO M:UIC
    STORE 0 TO M:QTYREC
    STORE 0 TO M:QTYINS
    STORE 0 TO M:QTYDEF
    STORE 0 TO M:QTYSTK
    STORE '                     ' TO M:NUM
    STORE '     ' TO M:OPEN
    STORE '     ' TO M:OVER
    STORE '                ' TO M:REPCON
    STORE '      ' TO M:FSCM
    STORE '           ' TO M:TIME
    STORE '                ' TO M:MFG
    STORE '         ' TO M:LOT
    STORE ' ' TO M:ITEM
    STORE '     ' TO M:OTF
    STORE ' ' TO M:GCV
    STORE '                ' TO M:DOCNO
    STORE '  ' TO M:DEF
    STORE ' ' TO M:WNTY
    STORE '      ' TO O:DDATE
    STORE '       ' TO O:MCDEL
    STORE '      ' TO O:DEFSER
    STORE '          ' TO O:HASSY
    STORE '            ' TO O:SASSY

***** THIS SEQUENCE CALCULATES THE UPPER AND LOWER YEARS
***** FOR INPUT AND IS BASED ON THE CURRENT JULIAN DATE
***** O:JULIAN.  O:LLIMIT= YEAR MINUS TWO YEARS
***** O:ULIMIT = YEAR PLUS ONE YEAR

STORE $(O:JULIAN,1,2) TO TEMP1
STORE VAL(TEMP1) TO TEMP1A
STORE VAL('2') TO LOW
STORE VAL('1') TO HIGH
STORE TEMP1A-LOW TO LLMT
STORE TEMP1A+HIGH TO ULMT
STORE STR(LLMT,2) TO O:LLIMIT
STORE STR(ULMT,2) TO O:ULIMIT
RELEASE TEMP1,TEMP1A,LOW,HIGH,LLMT,ULMT


*****  START OF THE INPUT FOR THE NSN

STORE '       ' TO O:RDATE
STORE T TO O:ANSWER
DO WHILE O:ANSWER
@ 5,20 SAY '******** ENTER DATA FOR THE NEW CASE ********'
@ 6,20 SAY '********        FROM    SF 368      ********'

STORE T TO O:RDATET
DO WHILE O:RDATET
     @ 8,20 SAY 'DATE RECEIVED BY FMSO   MMDDYY' ;
            GET O:RDATE PICTURE '999999'
     READ
     IF $(O:RDATE,1,2) <'01' .OR. $(O:RDATE,1,2) >'12';
        .OR.$(O:RDATE,3,2) <'01' .OR. $(O:RDATE,3,2) > '31';
        .OR. $(O:RDATE,5,2) < O:LLIMIT ;
        .OR. $(O:RDATE,5,2) > O:ULIMIT
             @ 23,30 SAY 'DATE OUT OF RANGE'
     ELSE
        STORE F TO O:RDATET
     ENDIF
ENDDO <O:RDATE>
```

```
@ 23,30 SAY '                                    '

***** ENTER THE CALL TO C:CJULIAN TO CHANGE MMDDYY TO
***** JULIAN FORMAT, STORE TO M:RDATE THEN RELEASE C:RDATE

STORE VAL($(C:RDATE,1,2)) TO V:MM
STORE VAL($(C:RDATE,3,2)) TO V:DD
STORE VAL($(C:RDATE,5,2)) TO V:YY
DO C:CJULIAN
STORE V:JULDATE TO M:RDATE
RELEASE ALL LIKE V:*
RELEASE C:RDATET
STORE T TO C:CAT
DO WHILE C:CAT
     @ 10,20 SAY 'CAT'
     @ 10,50 SAY ' ' GET M:CAT PICTURE '9'
     READ
     IF M:CAT ='1' .OR. M:CAT ='2'
        STORE F TO C:CAT
     ELSE
        @ 23,20 SAY ' 1 OR 2 ONLY'
     ENDIF
ENDDO C:CAT
@ 23,20 SAY '                    '
RELEASE C:CAT

STORE T TO C:COG1
STORE T TO C:COG2
DO WHILE C:COG1 .OR. C:COG2
   DO WHILE C:COG1

      @ 12,20 SAY 'COG'
      @ 12,50 SAY ' '  GET M:COG PICTURE '9X'
      READ
        IF $(M:COG,2,1) = ' '
         @ 23,20  SAY ' NO BLANKS IN 2D POSITION'
      ELSE
         STORE F TO C:COG1
         STORE !(M:COG) TO M:COG
      ENDIF
   ENDDO <C:COG1>
   @ 23,20 SAY '                                         '

***** CHECKS THAT COG IS VALID IN CURRENT COG TABLE... MUST
***** BE VALID TO CONTINUE

       USE D:COG INDEX D:COGS
       FIND  &M:COG
       IF # = 0
          @ 23,10 SAY ' COG INVALID - ENTER CORRECTED ENTRY'
          STORE T TO C:COG1
       ELSE
          STORE F TO C:COG2
       ENDIF
  ENDDO <C:COG1 & C:COG2>
  RELEASE C:COG1, C:COG2
  @ 23,10 SAY '                                             '

@ 14,20 SAY 'NSN        '
@ 14,50 SAY ' 'GET C:KEY PICTURE '9999-XX-XXX-9999'
READ

STORE T TO C:NATOT
DO WHILE C:NATOT
    IF $(C:KEY,5,1) =' ' .OR. $(C:KEY,6,1) = ' '
       @ 23,20 SAY ' NATO CODE MAY NOT HAVE BLANKS'
       @ 14,50 SAY ' ' GET C:KEY PICTURE '9999-XX-XXX-9999'
       READ
    ELSE
```

```
        @ 23,20 SAY '                                        '
        STORE F TO O:NATOT
     ENDIF
ENDDO  <O:NATOT>
RELEASE C:NATOT
@ 23,20 SAY '                                                '

STORE T TO C:FIINT
DO WHILE O:FIINT
     IF $(O:KEY,7,1) = ' ' .OR. $(O:KEY,8,1)=' ';
        .OR. $(O:KEY,9,1)=' '
        @ 23,40 SAY 'NO BLANKS IN THE FIRST 3 POSITIONS'
        @ 14,50 SAY ' ' GET O:KEY PICTURE '9999-XX-XXX-9999'
        READ
     ELSE
        @ 23,40 SAY '                                    '
        STORE F TO O:FIINT
     ENDIF FIINT
ENDDO  <C:FIINT>
RELEASE C:FIINT
@ 23,20 SAY '                                                '

STORE ' ' TO O:REPLY
@ 18,20 SAY '    VERIFY ABOVE INFORMATION '
@ 19,20 SAY ' YOU MAY NOT CHANGE IT AFTER THIS'
@ 20,20 SAY '   WITHOUT STARTING OVER AGAIN'
@ 22,25 SAY ' 1 - CONTINUE  2 - CHANGE  3 - EXIT'
@ 23,40 SAY ' ' GET C:REPLY
READ
IF O:REPLY  = '1'
   STORE F TO O:ANSWER
   ERASE
   @ 23,20 SAY 'SEARCHING FOR ANOTHER CASE WITH THIS NSN'
   RELEASE O:RDATE
ELSE
   IF O:REPLY = '3'
        RELEASE ALL EXCEPT C:*
        RETURN
   ELSE
        CLEAR GETS
        @ 22,25 SAY '                                       '
        @ 23,25 SAY '                                       '
   ENDIF
ENDIF
ENDDO O:ANSWER


STORE $(O:KEY,1,4) +$(O:KEY,6,2) + $(O:KEY,9,3);
      + $(O:KEY,13,4) TO M:KEY
STORE M:KEY TO M:NSN

*****  M:TYPE CODES TELL THE DBHANDLER WHAT TO DO WITH
*****  THE PARAMETERS

STORE '1A' TO M:TYPE
DO C:XDBHNDLR.PRG

***** CONTROL RETURNS TO THIS PROGRAM NOW
***** IF M:TYPE = 9 THEN THERE IS NOT A CURRENTLY
***** OPEN FILE

IF M:TYPE='9'
   STORE T TO O:ONONE
ELSE
   STORE F TO O:ONONE
   STORE M:REC1 TO O:PREVREC

   STORE T TO O:WHICH
   DO WHILE O:WHICH
```

```
      STORE '1I' TO M:TYPE
      DO C:XDBHNDLR.PRG

      IF M:NSN <> M:KEY .OR. EOF
         STORE O:PREVREC TO M:REC1
         STORE '1H' TO M:TYPE
         DO C:XDBHNDLR.PRG
         STORE F TO O:WHICH

***** THESE MUST BE RELEASED OR ELSE TOO MANY VARIABLES
***** WILL BE ASSIGNED (IE >64)

         RELEASE M:UI,M:UPRC,M:WUC,M:ACTDISP,M:ACTPT,;
                 M:DETAILS,M:DEFV,M:DEFR,;
                 M:O9C,M:DOC,M:ORG
         STORE '                                         ';
               +'      ' TO M:DATES
         STORE '     ' TO M:CLOSE
         STORE '      ' TO M:UIC
         STORE '      ' TO M:FSCM
         STORE '                      ' TO M:NUM
         STORE '                 ' TO M:MFG
         STORE '     ' TO M:REOPEN
         STORE '                 ' TO M:DOCNO
         STORE '     ' TO M:SCRDAT
         STORE '                 ' TO M:REPCON
         STORE '            ' TO M:TIME
         STORE 0 TO M:QTYINS
         STORE 0 TO M:QTYREC
         STORE 0 TO M:QTYSTK
         STORE 0 TO M:QTYDEF

      ELSE
         STORE M:REC1 TO O:PREVREC
      ENDIF

   ENDDO <O:WHICH>
ENDIF <OPENFILE>
   STORE M:CASE TO O:CCASE

***** SAVE THE CASE FROM THE OPENFILE FOR FUTURE COMPARISON
***** GO TO THE CLOSED DATA BASE AND CHECK FOR CASE WITH
***** THAT NSN

STORE '3A' TO M:TYPE
DO C:XDBHNDLR.PRG

***** CONTROL RETURNS TO THIS PROGRAM
***** IF M:TYPE = 9 THEN THERE IS NOT A CASE IN THE CLOSED
***** FILE

IF M:TYPE= '9'
   STORE T TO O:CNONE
ELSE
   STORE F TO O:CNONE
   STORE M:REC1 TO O:PREVREC

   STORE T TO O:WHICH
   DO WHILE O:WHICH
      STORE '3I' TO M:TYPE
      DO C:XDBHNDLR.PRG
      STORE M:REC1 TO O:PREVREC

      IF M:NSN <> M:KEY .OR. EOF
         STORE O:PREVREC TO M:REC1
         STORE '3H' TO M:TYPE
         DO C:XDBHNDLR.PRG
         STORE F TO O:WHICH
```

```
***** THESE MUST BE RELEASED OR ELSE TOO MANY VARIABLES
***** WILL BE ASSIGNED (IE >64)

            RELEASE M:UI,M:UPRC,M:WUC,M:ACTDISP,M:ACTPT,;
                    M:DETAILS,M:DEFV,M:DEFR,M:09Q,M:DOC,;
                    M:ORG,M:REPLY,M:ACTTKN,M:STATUSC,;
                    M:CAUSEC,RETC

            STORE '                                             ';
                 +'          ' TO M:DATES
            STORE '      ' TO M:CLOSE
            STORE '       ' TO M:UIC
            STORE '       ' TO M:FSCM
            STORE '                     ' TO M:NUM
            STORE '                ' TO M:MFG
            STORE '      ' TO M:REOPEN
            STORE '                ' TO M:DOCNO
            STORE '      ' TO M:SCRDAT
            STORE '                ' TO M:REPCON
            STORE '           ' TO M:TIME
            STORE 0 TO M:QTYINS
            STORE 0 TO M:QTYREC
            STORE 0 TO M:QTYSTK
            STORE 0 TO M:QTYDEF

         ELSE
            STORE M:REC1 TO O:PREVREC
         ENDIF

      ENDDO <O:WHICH>
      STORE M:CASE TO O:CCASE
   ENDIF <CLOSEFILE>

***** COMPARE THE VALUES OF CASE NUMBER FROM OPEN AND
***** CLOSE, AND USE THE LARGEST ONE FOR SUFFIX
***** CALCULATION

        IF O:OCASE > O:CCASE
           STORE O:OCASE TO M:CASE
           RELEASE O:CCASE,O:OCASE
        ELSE
           STORE O:CCASE TO M:CASE
           RELEASE O:OCASE,O:CCASE
        ENDIF

***** ONLY GO INTO THE NEXT IF-ENDIF WHERE THE NSN WAS NOT
***** FOUND IN EITHER THE OPEN OR THE CLOSED FILE

IF O:CNONE .AND. O:CNONE

ELSE

***** CALCULATE SUFFIX FOR THE ADDITIONAL CASE FOR THE NSN

      STORE $(M:CASE,7,1) TO O:LAST
      IF O:LAST = ' '
         STORE $(M:CASE,1,6) + 'A' TO M:CASE
      ELSE
         STORE RANK(O:LAST) +1 TO O:SUFFIX
         STORE CHR(O:SUFFIX) TO O:LETTER
         STORE $(M:CASE,1,6) + O:LETTER TO M:CASE
      ENDIF
ENDIF


ENDIF
RELEASE O:LAST,O:LETTER,O:KEY,O:PREVREC,O:ONONE,O:CNONE,O:WHICH
ERASE
```

```
*****  START OF NEW CASE DATA ENTRY

@  0,1 SAY 'SF368'
@  1,2 SAY '5.     NSN                                       '
@  2,2 SAY '       CATEGORY                                  '
@  3,2 SAY '       SMIC                                      ' GET M:SM ;
       PICTURE 'AX'
@  4,2 SAY '1A.    UIC                                       ' GET M:UIC
@  5,2 SAY '3.     REPORT CONTROL
       ';
       GET M:REPCON PICTURE 'XXXXXX-99-9999'
@  6,2 SAY '4.     DATE DISCOVERED    MMDDYY        ';
       GET C:DDATE PICTURE 'XXXXXX'
@  7,2 SAY '6.     NOMENCLATURE                     ';
       GET M:NOMEN PICTURE 'XXXXXXXXXXXXXXXXXX'
@  8,2 SAY '7.     FSCM                    <O>      ';
       GET M:FSCM PICTURE 'XXXXXX'
@  9,2 SAY '8.     MFG. PART NUMBER        <O>      ';
       GET M:MFG PICTURE 'XXXXXXXXXXXXXXXXX'
@ 10,2 SAY '9.     SERIAL/LOT/BATCH        <O>      ';
       GET M:LOT PICTURE 'XXXXXXXXX'
@ 11,2 SAY '10.    CONTRACT/PO             <O>      ';
       GET M:NUM PICTURE 'XXXXXX-99-A-XXXX-XXXX'
@ 12,2 SAY '       DOCUMENT    NUMBER      <O>      ';
       GET M:DOCNO PICTURE 'XXXXXX-9999-9999'
@ 13,2 SAY '11.    ITEM          N OR O    <O>      ';
       GET M:ITEM PICTURE 'A'
@ 14,2 SAY '12.    DATE MFG/REP/OVHL       <O>      ';
       GET M:OVER PICTURE '99999'
@ 15,2 SAY '13.    OPN TIME AT FAILURE     <O>      ';
       GET M:OTF PICTURE 'AXXXX'
@ 16,2 SAY '14.    GOV FURNISHED MATL      <O>      ';
       GET M:GOV PICTURE 'X'
@ 17,2 SAY '15.    QTY: REC/INSP/DEF/STK            ';
       GET M:QTYREC PICTURE '999999'
@ 18,2 SAY '16A1.  TYPE/MODEL/SERIES       <O>      ' GET C:MODEL
@ 19,2 SAY '  A2.  SERIAL NUMBER           <O>      ' GET O:DEFSER
@ 20,2 SAY '  B.   NEXT HIGHER ASSY        <O>      ' GET O:HASSY
@ 21,2 SAY '       SUB-ASSEMBLY            <O>      ' GET O:SASSY

@ 1,38 SAY   $(M:KEY,1,4)+'-'+$(M:KEY,5,2)+'-'+$(M:KEY,7,3);
           +'-'+$(M:KEY,10,4)
@ 2,38 SAY   M:CAT
CLEAR GETS

STORE T TO C:CORRECT
DO WHILE O:CORRECT

IF M:COG = '1H' .OR. M:COG = '2H' .OR. M:COG = '7H'
    STORE T TO O:SMIC1
    DO WHILE O:SMIC1
         @ 3,2 SAY '          SMIC                               ' GET;
               M:SM PICTURE 'AX'
         READ
         STORE !(M:SM) TO M:SM
         IF $(M:SM,1,1) = 'X' .OR. $(M:SM,1,1) = 'L'
            STORE F TO O:SMIC1
         ELSE
            @ 23,30 SAY 'X OR L ONLY'
         ENDIF
    ENDDO <C:SMIC1>
ENDIF
RELEASE  O:SMIC1
@ 23,30 SAY '                           '

STORE T TO C:UIC1
DO WHILE O:UIC1
      @ 4,35 SAY ' ' GET M:UIC PICTURE 'AXXXXX'
```

```
     STORE !(M:UIC) TO M:UIC
     READ
     IF $(M:UIC,1,1) = ' ' .OR. $(M:UIC,2,1)= ' '.OR.;
        $(M:UIC,3,1)= ' ' .OR. $(M:UIC,4,1)= ' ' .OR.;
        $(M:UIC,5,1)= ' ' .OR. $(M:UIC,6,1)= ' '
        @ 23,20 SAY ' NO BLANKS ALLOWED IN UIC'
     ELSE
        STORE F TO O:UIC1
     ENDIF
ENDDO <O:UIC1>
     @ 23,20 SAY '                              '
RELEASE O:UIC1

***** REPORT CONTROL

***** REPORT CONTROL NUMBER (RCN) FORMAT CHANGED DUE TO
***** MSG FROM FMSO NCV83
***** OLD: 'XXXXXX-XXXX-XXXX'    NEW: 'XXXXXX-99-9999'

     @ 5,35 SAY ' ' GET M:REPCON PICTURE 'XXXXXX-99-9999'
     READ

*****   1.TAKE DATE TO JULIAN FORMAT 2. NUMERIC DATA

STORE T TO O:DDATET
DO WHILE O:DDATET
     @ 6,35 SAY ' ' GET O:DDATE PICTURE '999999'
     READ
     IF O:DDATE = '      '
        @ 23,30 SAY 'MAY NOT BE BLANK          '
     ELSE
        IF $(O:DDATE,1,2) < '01'.OR. $(O:DDATE,1,2) > '12';
           .OR.  $(O:DDATE,3,2) < '01';
           .OR.  $(O:DDATE,3,2) > '31';
           .OR.  $(O:DDATE,5,2) < O:LLIMIT;
           .OR.  $(O:DDATE,5,2) > O:ULIMIT
              @ 23,30 SAY ' DATE OUT OF RANGE'
        ELSE
              STORE F TO O:DDATET
        ENDIF
     ENDIF
ENDDO <O:DDATET>
@ 23,30 SAY '                                         '
RELEASE O:DDATET

*****  CALL C:OJULIAN TO CONVERT TO JULIAN DATE

STORE VAL($(O:DDATE,1,2)) TO V:MM
STORE VAL($(O:DDATE,3,2)) TO V:DD
STORE VAL($(O:DDATE,5,2)) TO V:YY
DO C:OJULIAN
STORE V:JULDATE TO M:DDATE
RELEASE ALL LIKE V:*

STORE T TO O:NOMEN
DO WHILE O:NOMEN
     @ 7,35 SAY ' 'GET M:NOMEN PICTURE 'XXXXXXXXXXXXXXXXXXX'
     READ
     IF $(M:NOMEN,1,1) = ' ' .OR. $(M:NOMEN,2,1) = ' ' ;
        .OR. $(M:NOMEN,3,1) =' '
        @ 23,30 SAY ' NO BLANKS IN FIRST 3 POSITIONS'
     ELSE
        STORE F TO O:NOMEN
     ENDIF
ENDDO <O:NOMEN>
@ 23,30 SAY '                                '
RELEASE O:NOMEN

*****  INPUT FSCM
```

```
@  8,35 SAY ' ' GET M:FSCM PICTURE  'XXXXXX'

***** INPUT MANUFACTURERS PART NUMBER

@  9,35 SAY ' ' GET M:MFG PICTURE 'XXXXXXXXXXXXXXX'
@ 10,35 SAY ' ' GET M:LOT PICTURE 'XXXXXXXXX'

*****  INPUT CONTRACT NUMBER

@ 11,35 SAY ' ' GET M:NUM PICTURE 'XXXXXX-99-A-XXXX-XXXX'

***** INPUT DOCUMENT NUMBER

STORE T TO O:UICT
STORE T TO O:PREPT
STORE T TO O:DOCT
DO WHILE C:DOCT .OR. C:UICT
     @ 12,35 SAY ' ' GET M:DOCNO PICTURE 'AXXXXX-9999-9999'
     READ
     IF M:DOCNO = '      -    -    '
        STORE F TO O:DOCT
        STORE F TO O:UICT
     ELSE

        IF $(M:DOCNO,1,1) =' ' .OR. $(M:DOCNO,2,1)= ' ';
           .OR. $(M:DCCNO,3,1)= ' ';
           .OR. $(M:DCCNO,4,1) = ' ';
           .OR. $(M:DCCNO,5,1) = ' '
           @ 23,20 SAY ' NO BLANKS ALLOWED IN UIC'
        ELSE
           STORE F TC O:DOCT
        ENDIF
        IF $(M:DCCNO,12,3) >'366';
           .OR. $(M:DCCNO,12,3) = '   ';
           .OR. $(M:DCCNO,11,4) = '    '
           @  23,50 SAY 'PREP DATE OUT OF RANGE '
        ELSE
           STORE F TC O:UICT
        ENDIF
     ENDIF <ALL BLANKS>
ENDDO <O:DOCT .AND. C:UICT>
RELEASE C:UICT,O:DOCT
@ 23,20 SAY '                                                      '

***** DOCUMENT NUMBER END

STORE T TO O:ITEM
DO WHILE O:ITEM

     @ 13,35 SAY ' ' GET M:ITEM PICTURE 'A'
     READ
     IF M:ITEM = 'N' .OR. M:ITEM = 'O' .OR. M:ITEM = ' '
          STORE F TO C:ITEM
     ELSE
          @ 23,30 SAY ' USE N OR O '
     ENDIF
ENDDC  <C:ITEM>
@ 23,30 SAY '                                               '
RELEASE C:ITEM
IF M:ITEM <> ' '

***** THE NEXT FIVE LINES CALCULATE EARLIEST YEAR TO ALLOW
***** FOR OVERHAUL ENTRY

STORE $(C:JULIAN,1,2) TO TEMP1
STORE VAL(TEMP1) TO TEMP1A
STORE VAL('10') TO LCW
STORE TEMP1A-LOW TO TEMP2
STORE STR(TEMP2,2) TO O:TENYRS
RELEASE TEMP1,TEMP1A,TEMP2,LOW
    STORE T TO O:OVER
    DO WHILE O:OVER
        @ 14,35 SAY ' ' GET M:OVER PICTURE '99999'
        READ
        IF M:OVER='      '
             STORE F TO O:OVER
        ELSE
           IF $(M:OVER,3,3) > '365';
             .OR. $(M:OVER,1,2) < O:TENYRS ;
             .OR. $(M:OVER,1,2) > O:ULIMIT
                @ 23,30 SAY 'DATE OUT OF RANGE'
           ELSE
                STORE F TO O:OVER
           ENDIF
        ENDIF
    ENDDO <O:OVER>
    @ 23,30 SAY '                     '
ENDIF
RELEASE O:OVER,O:TENYRS

STORE T TO O:OTF
DO WHILE O:OTF
    @ 15,35 SAY ' ' GET M:OTF PICTURE 'A9999'
    READ
    IF M:OTF = '     '
       STORE F TO O:OTF
    ELSE
       IF $(M:OTF,1,1) = 'N' .OR. $(M:OTF,1,1) ='O';
          .AND.$(M:OTF,2,4) > '0000'
             STORE F TO O:OTF
       ELSE
             @ 23,30 SAY 'USE N OR O AND THEN TIME (A9999)'
       ENDIF
    ENDIF
ENDDO  <O:OTF>
@ 23,30 SAY '                                             '
RELEASE O:OTF
STORE T TO O:GOV
DO WHILE O:GOV
     @ 16,35 SAY ' ' GET M:GOV PICTURE 'X'
     READ
     IF  M:GOV = ' ' .OR.  M:GOV = 'Y'  .OR. M:GOV = 'N'
         STORE  F TO O:GOV
     ELSE
         @ 23,30 SAY 'USE EITHER Y OR N OR LEAVE BLANK'
     ENDIF
ENDDO <O:GOV>
@ 23,30 SAY '                                        '
RELEASE O:GOV
STORE T TO O:QTYRECT
DO WHILE O:QTYRECT

@ 17,35 SAY ' ' GET M:QTYREC  PICTURE '999999'
READ
IF M:QTYREC < 0 .OR. M:QTYREC > 999999
   @ 23,30 SAY 'OUT OF RANGE'
ELSE
   STORE F TO O:QTYRECT
ENDIF
ENDDO
@ 23,30 SAY '                                   '
RELEASE O:QTYRECT
STORE T TO O:QTYINS
DO WHILE O:QTYINS
    @ 17,43 SAY '/' GET M:QTYINS  PICTURE '999999'
    READ
```

```
        IF M:QTYINS < 0 .OR. M:QTYINS > 999999
            @ 23,30 SAY ' OUT OF RANGE'
        ELSE
            STORE F TO O:QTYINS
        ENDIF
    ENDDO <O:QTYINS>
    @ 23,30 SAY '                                         '
    RELEASE C:QTYINS
    STORE T TO C:QTYDEF
    DO WHILE O:QTYDEF
        @ 17,50 SAY '/'  GET M:QTYDEF PICTURE '999999'
        READ
        IF M:QTYDEF < 1 .OR. M:QTYDEF > 999999
            @ 23,30 SAY ' DEFICIENT
     OUT OF RANGE'
        ELSE
            STORE F TO O:QTYDEF
        ENDIF
    ENDDO O:QTYDEF
    RELEASE C:QTYDEF
    @ 23,30 SAY '                                       '
    STORE T TO O:QTYSTK
    DO WHILE O:QTYSTK
        @ 17,57 SAY  '/' GET M:QTYSTK  PICTURE '999999'
        READ
        IF M:QTYSTK < 0 .OR. M:QTYSTK  > 999999
            @ 23,30  SAY 'IN STOCK
     OUT OF RANGE'
        ELSE
            STORE F TO O:QTYSTK
        ENDIF
    ENDDO O:QTYSTK
    @ 23,30 SAY '                               '
    RELEASE C:QTYSTK

    @ 18,35 SAY ' ' GET C:MODEL PICTURE 'XXXXXXX'
    READ
    @ 19,35 SAY ' ' GET C:DEFSER PICTURE 'XXXXXX'
    READ
    @ 20,35 SAY ' ' GET C:HASSY PICTURE 'XXXXXXXXXX'
    READ
    @ 21,35 SAY ' ' GET C:SASSY PICTURE 'XXXXXXXXXXXX'
    READ
    STORE O:MODEL+O:DEFSER+O:HASSY+ O:SASSY TO M:DITEM

    ***** PROMPT USER FOR RESPONSE

    STORE T TO C:END
    DO WHILE O:END

         STORE ' ' TO O:REPLY
         @ 22,10 SAY '    *******   CHECK PREVIOUS ENTRIES ';
                +' ******* '
         @ 23,10 SAY ' CHOOSE 1- CONTINUE ENTRY   2- MAKE ';
                +'CORRECTIONS ' GET O:REPLY
         READ
         IF C:REPLY <> '1' .AND. O:REPLY <> '2'
             @ 23,10 SAY ' ANSWER WITH A 1 OR 2 ONLY              '
         ELSE
             STORE F TO C:END
         ENDIF
    ENDDO <O:END>

    IF O:REPLY = '2'
       STORE T TO O:CORRECT
       @ 22,10 SAY '                                                   '
       @ 23,10 SAY '                                                   '

    ELSE
```

```
   STORE F TO O:CORRECT
ENDIF
ENDDO <O:CORRECT>
ERASE
RELEASE O:MODEL,O:DEFSER,O:HASSY,O:SASSY,O:END,O:COUNT

***** HERE IS THE COMPRESSION OF M:REPCON,M:NUM,M:DOCNO

STORE $(M:REPCON,1,6)+$(M:REPCON,8,2)+$(M:REPCON,11,4)  TO ;
      O:REPCON
STORE O:REPCON TO M:REPCON
STORE $(M:NUM,1,6)+$(M:NUM,8,2)+$(M:NUM,11,1)+$(M:NUM,13,4);
      +$(M:NUM,18,4)  TO O:NUM
STORE O:NUM TO M:NUM
STORE $(M:DOCNO,1,6)+$(M:DOCNO,8,4)+$(M:DOCNO,13,4)  TO ;
      O:DOCNO
STORE O:DOCNO TO M:DOCNO
RELEASE O:REPCON,O:NUM,O:DOCNO

***** CAPTURE THE JULIAN DATE  AND PUT INTO OPENING DATE

         STORE O:JULIAN TO M:OPEN
         STORE M:DDATE+M:RDATE+M:OPEN+;
         +'                              N' TO M:DATES
         RELEASE M:DDATE,M:RDATE,M:OPEN,O:ACTPTT,O:PREPT,;
                 O:LLIMIT,O:ULIMIT

***** THIS IS THE START OF THE SECOND SCREEN OF DATA ENTRY

STORE '   ' TO M:UI
STORE 0 TO M:UPRC
STORE '       ' TO M:WUC
STORE ' ' TO M:ACTDISP
STORE '             ' TO M:ACTPT
STORE '                                                    ';
      +'                                                   ';
      +'                    ' TO M:DETAILS
STORE ' ' TO M:DEFV
STORE ' ' TO M:DEFR
STORE '  ' TO M:DEF
STORE ' ' TO M:09Q
STORE ' ' TO M:DOC
STORE '    ' TO M:ORG
STORE  0 TO M:CCOST
     STORE T TO O:PAGE2
     DO WHILE O:PAGE2

@ 0,10 SAY '     UI                                           ';
      GET M:UI
@ 1,10 SAY '     UNIT PRICE          ' GET M:UPRC PICTURE ;
      '999999.99'
@ 2,10 SAY '18.  EST. CORRECTION COST                 <O> 'GET;
      M:CCOST PICTURE '999999999.99'
@ 3,10 SAY '19.  WARRANTY - Y/N/U                         'GET;
      M:WNTY PICTURE 'A'
@ 4,10 SAY '20.  WORK UNIT CODE                       <O> 'GET;
      M:WUC
@ 5,10 SAY '21.  ACTION/DISPOSITION -H/I/D/R/O        <O> 'GET;
      M:ACTDISP PICTURE 'X'
@ 6,10 SAY '22.  DETAILS OF DISCREPANCY - FIRST 2 '
@ 7,10 SAY '       LETTERS MUST BE DISCOVERY CODE'
@ 8,10 SAY '              ' GET M:DETAILS
@ 12,10 SAY '23A. ACTION POINT                            ';
        GET M:ACTPT PICTURE 'AXXXXX99999'
@ 13,10 SAY '     DEFECT VERIFICATION CODE - N/O/U/Y <O>';
        GET M:DEFV PICTURE 'A'
@ 14,10 SAY '     DEFECT RESPONSIBILITY - C/N/S/U/X  <O>';
        GET M:DEFR PICTURE 'A'
@ 15,10 SAY '     9Q                                       ';
```

```
         GET M:O9Q PICTURE 'X'
@ 16,10 SAY '     ORIGIN CODE                                     ';
         GET M:ORG PICTURE 'AAX'
@ 17,10 SAY '30.   TYPE DOC                                      ';
         GET M:DOC PICTURE '9'
@ 18,10 SAY '      TYPE DEFICIENCY                                ';
         GET M:DEF PICTURE '99'

CLEAR GETS
          STORE T TO O:UI
          DO WHILE O:UI
                @ 0,10 SAY '      UI                                ;
                     ' GET M:UI PICTURE 'AA'
                READ
                IF $(M:UI,1,1) = ' ' .OR. $(M:UI,2,1) = ' '
                    @ 23,30 SAY ' NO BLANKS'
                ELSE
                    STORE F TO O:UI
                ENDIF
          ENDDO O:UI
          @ 23,30 SAY '                           '
          RELEASE O:UI

          STORE T TO C:EPRC
          STORE T TO C:UPRC
          DO WHILE O:UPRC .OR. O:EPRC

              DO WHILE O:UPRC
                  @ 1,10 SAY '      UNIT PRICE         ' GET;
                         M:UPRC PICTURE '999999.99'
                  READ
                  IF M:UPRC < .01 .OR. M:UPRC > 999999.99
                      @ 23,30 SAY ' AMOUNT OUT OF RANGE '
                  ELSE
                      STORE F TO O:UPRC
                  ENDIF
              ENDDO <C:UPRC>
              @ 23,30 SAY '                              '
              STORE (M:UPRC * M:QTYDEF) TO M:EPRC

              @ 1,43 SAY 'EXT PRICE $'
              @ 1,54 SAY M:EPRC  PICTURE '999999999.99'
              IF M:EPRC >= 100000000
                  @ 23,30 SAY ' EXTENDED PRICE OUT OF RANGE'
              ELSE
                  STORE F TO O:EPRC
              ENDIF
          ENDDO <O:UPRC & O:EPRC>
          RELEASE O:UPRC,O:EPRC
          @ 23,30 SAY '                                          '
              @ 2,10 SAY '18.   EST. CORRECTION COST           ';
                 +'<O> 'GET M:CCOST PICTURE '999999999.99'
              READ

          STORE T TO C:WNTY
          DO WHILE O:WNTY
              @ 3,10 SAY '19.   WARRANTY - Y/N/U                ;
                        ' GET M:WNTY PICTURE 'A'
              STORE !(M:WNTY) TO M:WNTY
              READ
              IF M:WNTY <> 'Y' .AND. M:WNTY <> 'N' ;
                 .AND. M:WNTY <> 'U'
                    @ 23,30 SAY 'USE Y,N OR U '
              ELSE
                    STORE F TO O:WNTY
              ENDIF
          ENDDO <O:WNTY>
          @ 23,30 SAY '                              '
          RELEASE O:WNTY
```

```
    @ 4,10 SAY '20.  WORK UNIT CODE                              ;
           <O> ' GET M:WUC PICTURE 'XXXXXXX'
    STORE T TO O:ACTDISP
    DO WHILE O:ACTDISP
        @ 5,10 SAY '21.  ACTION/DISPOSITION ';
               +'-H/I/D/R/O       <O> ' ;
               GET M:ACTDISP PICTURE 'X'
        READ
        IF M:ACTDISP = 'H' .OR. M:ACTDISP = 'I' ;
           .OR. M:ACTDISP = 'D'.OR. M:ACTDISP = 'R' ;
           .OR. M:ACTDISP = 'O' .OR. M:ACTDISP =' '
              STORE F TO O:ACTDISP
        ELSE
              @ 23,30 SAY ' ERROR IN CODE'
        ENDIF
    ENDDO <O:ACTDISP>
    @ 23,30 SAY '                               '
    RELEASE O:ACTDISP

STORE T TO O:DISCODE
DO WHILE O:DISCODE

   @ 6,10 SAY '22.  DETAILS OF DISCREPANCY - FIRST 2 '
   @ 7,10 SAY '         LETTERS MUST BE DISCOVERY CODE'
   @ 8,10 SAY '                 ' GET M:DETAILS
   READ
   STORE  $(M:DETAILS,1,2) TO M:DIS
   STORE !(M:DIS) TO M:DIS
   USE D:WHEREDIS INDEX D:DISCODE
   FIND &M:DIS
      IF  # = 0
          @ 23,30 SAY 'WHERE DISCOVERED CODE INCORRECT'
      ELSE
          STORE F TO O:DISCODE
      ENDIF
      ENDDO <O:DISCODE>
      @ 23,30 SAY '                                 '
      RELEASE O:DISCODE

    STORE T TO O:ACTPTT
    DO WHILE O:ACTPTT
        @ 12,10 SAY '23A. ACTION POINT                  ;
                     ' GET M:ACTPT PICTURE 'AXXXXX99999'
        READ
        IF M:ACTPT= '            '
            @ 23,30 SAY 'MAY NOT BE BLANK'
        ELSE
            STORE F TO O:ACTPTT
        ENDIF
    ENDDO <O:ACTPTT>
    @ 23,30 SAY '                            '

      STORE T TO O:DEFV
      DO WHILE O:DEFV
          @ 13,10 SAY '     DEFECT VERIFICATION CODE';
                 +'-N/O/U/Y <O>' GET M:DEFV PICTURE 'A'
          READ
          IF M:DEFV = 'N' .OR. M:DEFV = 'O' ;
            .OR. M:DEFV = 'U' ;
            .OR. M:DEFV= 'Y' .OR. M:DEFV = ' '
            STORE F TO O:DEFV
          ELSE
            @ 23,30 SAY 'CORRECT CODE MUST BE ENTERED'
          ENDIF
    ENDDO <O:DEFV>
    @ 23,30 SAY '                                    '
    RELEASE O:DEFV
```

```
STORE T TO O:DEFR
DO WHILE O:DEFR
    @ 14,10 SAY '      DEFECT RESPONSIBILITY -;
           +'C/N/S/U/X  <O>' GET M:DEFR PICTURE 'A'
    READ
    IF M:DEFR = 'C' .OR. M:DEFR = 'N' ;
       .OR. M:DEFR = 'S' .OR. M:DEFR = 'U' ;
       .OR. M:DEFR = 'X' .OR. M:DEFR = ' '
        STORE F TO O:DEFR
    ELSE
        @ 23,30 SAY 'CORRECT CODE MUST BE ENTERED'
    ENDIF
ENDDO <O:DEFR>
@ 23,30 SAY '                                     '
RELEASE O:DEFR

IF M:COG ='9Q'
    STORE T TO O:9Q
    DO WHILE O:9Q
        @ 15,10 SAY '     9Q                  ';
             +'                  ' GET M:O9Q PICTURE 'X'
        READ
        IF M:O9Q ='2' .OR. M:O9Q ='4' ;
           .OR. M:O9Q ='5' .OR. M:O9Q ='7';
           .OR. M:O9Q ='9' .OR. M:O9Q =' '
            STORE F TO O:9Q
        ELSE
            @ 23,30 SAY ' OUT OF RANGE'
        ENDIF
    ENDDO <O:9Q>
    @ 23,30 SAY '                                     '
    RELEASE O:9Q
ENDIF <M:COG = 9Q>

STORE T TO O:ORG
DO WHILE O:ORG
    @ 16,10 SAY '      ORIGIN CODE                 ';
           +'                ' GET M:ORG PICTURE 'AAX'
    READ
    IF $(M:ORG,1,1) =' '.OR. $(M:ORG,2,1) = ' '
        @ 23,20 SAY ' FIRST 2 POSITIONS MAY NOT';
                +'CONTAIN BLANKS'
     ELSE
        STORE F TO O:ORG
     ENDIF
ENDDO <O:ORG>
@ 23,20 SAY '                                          '
RELEASE O:ORG

STORE T TO O:TYPE
DO WHILE O:TYPE
    @ 17,10 SAY '30.  TYPE DOC                 ';
           +'                ' GET M:DOC PICTURE '9'
    READ
    IF M:DOC < '1' .OR. M:DOC > '7'
        @ 23,30 SAY 'OUT OF RANGE'
    ELSE
        STORE F TO O:TYPE
    ENDIF
ENDDO <O:TYPE>
@ 23,30 SAY '                          '
RELEASE O:UIC,O:UIC2,O:PREP,O:DOC,O:SERNO,O:TYPE

STORE T TO O:DEF
DO WHILE O:DEF
    @ 18,10 SAY '      TYPE DEFICIENCY          ';
           +'                  ' GET M:DEF PICTURE '99'
    READ
    IF M:DEF < '01' .OR. M:DEF > '19'
```

```
                @ 23,30 SAY 'USE 01 - 19 ONLY'
            ELSE
                STORE F TO O:DEF
            ENDIF
        ENDDO <O:DEF>
        RELEASE O:DEF
        @ 23,30 SAY '                                    '

***** PROMPT USER FOR RESPONSE

        STORE T TO O:END
        DO WHILE O:END

            STORE ' ' TO O:REPLY
            @ 20,20 SAY ' 1 - POST CASE'
            @ 21,20 SAY ' 2 - CHANGE DATA'
            @ 22,20 SAY ' 3 - EXIT WITHOUT POSTING '

            @ $+1,34 SAY ' ' GET O:REPLY
            READ
            IF O:REPLY <> '1' .AND. O:REPLY <> '2' ;
                .AND. O:REPLY <> '3'
                @ 23,5 SAY ' ANSWER WITH  1 - 2 - 3 ONLY '
            ELSE
                STORE F TO O:END
            ENDIF
        ENDDO <O:END>
        @ 23,10 SAY '                                       '
        RELEASE O:END

        ERASE
        IF O:REPLY = '1'
            @ 10,20 SAY 'CASE BEING POSTED TO DATA BASE '
            @ 13,20 SAY '        PLEASE STANDBY          '
            @ 20,20 SAY '***    DO NOT INTERRUPT    ***  '

            STORE F TO O:PAGE2
            STORE '1F' TO M:TYPE
            DO C:XDEHNDLR.PRG
            STORE '2F' TO M:TYPE
            DO C:XDEHNDLR.PRG

            ERASE
            @ 10,20 SAY '  CASE NUMBER OF THE NEW CASE'
            @ 12,33 SAY M:CASE
            @ 23,20 SAY '   PRESS ANY KEY TO CONTINUE'
            WAIT

        ENDIF
        IF O:REPLY = '2'
            STORE T TO O:PAGE2
        ELSE
            IF O:REPLY = '3'
                STORE F TO O:PAGE2
            ENDIF
        ENDIF

    ENDDO <O:PAGE2>
    RELEASE ALL EXCEPT O:*
    STORE T TO O:TRUE
  ENDDO <O:TRUE>
RETURN

***** END OF PROGRAM
```

V. CASE UPDATE MODULE

```
*************************************************************
**                                                         **
**   DATE: 8 DECEMBER 1983                                 **
**   VERSION: 1.0                                          **
**   MODULE NAME: UPDATE                                   **
**   MODULE PURPOSE: ALLOW ADDITION AND/OR CORRECTION OF   **
**                   DATA IN QDR CASE CURRENTLY IN QDR     **
**                   SYSTEM.                               **
**   MODULE INTERFACE DEFINITION                           **
**      INPUTS: CASE, C:WHO, C:JULIAN                      **
**      OUTPUTS: ALL DATA ELEMENTS IN OPEN1 & OPEN2,       **
**               M:TYPE                                    **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:              **
**                                                         **
**      USER ENTERS CASE NUMBER OF CASE TO BE CHANGED.     **
**      MODULE SEARCHES DATA BASE FOR CASE AND             **
**      DISPLAYS INFORMATION CURRENTLY ON FILE THROUGH     **
**      A SERIES OF THREE MENUS. DATA IS WRITTEN TO        **
**      FIRST DATA BASE MIDWAY IN PROCESS DUE TO           **
**      LIMIT OF 64 MEMORY VARIABLES AT ANY ONE TIME.      **
**      CHANGE OF DATES IS NOTED FOR STATISTIC             **
**      MODULE UTILIZATION.                                **
**                                                         **
**   SUPERORDINATE MODULES: MENU1                          **
**   SUBORDINATE MODULES: XDEHNDLR                         **
**   AUTHOR: J.G. BOYNTON                                  **
**                                                         **
*************************************************************

STORE T TO U:UPDATE
DO WHILE U:UPDATE
  STORE T TO U:TRUE
  DO WHILE U:TRUE
  ERASE
  STORE ' 'TO U:CHOICE
  TEXT
                              ***** UPDATE *****


                          THIS PROGRAM ALLOWS YOU TO

                              UPDATE A QDR CASE




                               1 - CONTINUE

                               2 - RETURN TO MENU
  ENDTEXT
  @ 20,40 SAY ' ' GET U:CHOICE
  READ
  DO WHILE U:CHOICE <> '1' .AND. U:CHOICE <> '2'
     @ 23,20 SAY 'ENTER 1 OR 2 FOR YOUR RESPONSE'
     @ 20,40 SAY ' ' GET U:CHOICE
     READ
  ENDDO <U:CHOICE>
  ERASE
  IF U:CHOICE = '2'
     RELEASE ALL EXCEPT C:*
```

```
      RETURN
    ENDIF

ERASE
      STORE '        'TO M:CASE
TEXT
                          ***** SELECT RECORD FOR UPDATE *****

                                  ENTER THE CASE NUMBER
                               OF THE RECORD TO BE UPDATED


ENDTEXT
STORE ' ' TO U:REPLY
@ 10, 29 SAY 'CASE ' GET M:CASE PICTURE '999999X'
READ
STORE M:CASE TO M:KEY
STORE '1E'  TO M:TYPE
DO C:XDBHNDLR
IF M:TYPE = '9'
   @ 12,25 SAY 'RECORD NOT FOUND IN OPEN FILE '
   @ 13,21 SAY 'DO YOU WISH TO CHECK THE CLOSED FILE ?'
   @ 14,40 GET U:REPLY PICTURE 'A'
   READ
   DO WHILE !(U:REPLY) <> 'Y' .AND. !(U:REPLY) <> 'N'
      @ 14,45 SAY 'ENTER Y OR N'
      @ 14,40 GET U:REPLY PICTURE 'A'
      READ
   ENDDO
   @ 14,45 SAY '                 '
   IF !(U:REPLY) = 'Y'
      STORE '3E' TO M:TYPE
      DO C:XDBHNDLR
      IF M:TYPE = '9'
         @ 16,23 SAY 'RECORD NOT FOUND IN THE QDR SYSTEM'
         @ 17,27 SAY 'STRIKE ANY KEY TO CONTINUE'
         WAIT TO U:REPLY
      ELSE
        IF M:TYPE = '1'
           @ 18,28 SAY 'RECORD CURRENTLY IN USE'
           @ 19,27 SAY 'STRIKE ANY KEY TO CONTINUE'
           WAIT TO U:REPLY
        ELSE
           ERASE
           STORE F TO U:TRUE
           STORE 'CLOSE' TO U:FILE
        ENDIF
      ENDIF
   ENDIF
ELSE
   IF M:TYPE = '1'
      @ 12,28 SAY 'RECORD CURRENTLY IN USE'
      @ 13,27 SAY 'STRIKE ANY KEY TO CONTINUE'
      @ 14,40 GET U:REPLY
      READ
   ELSE
      ERASE
      STORE F TO U:TRUE
      STORE 'OPEN' TO U:FILE
   ENDIF
ENDIF
ENDDO <U:TRUE>

**** THIS SECTION FOR CURRENT DATES VALUE CAPTURE

ERASE

 STORE $(M:DATES,1,5) TO M:DDATE
STORE $(M:DATES,6,5) TO M:RDATE
STORE $(M:DATES,11,5) TO M:OPEN
STORE $(M:DATES,16,5) TO M:LDATE
STORE $(M:DATES,21,5) TO M:SCRDATE
STORE $(M:DATES,26,5) TO M:IRDATE
STORE $(M:DATES,31,5) TO M:RIMDAT
STORE $(M:DATES,36,5) TO M:CLOSE
STORE $(M:DATES,41,5) TO M:REOPEN

STORE M:DDATE TO T:DDATE
STORE M:RDATE TO T:RDATE
STORE M:OPEN  TO T:OPEN
STORE M:LDATE TO T:LDATE
STORE M:SCRDATE TO T:SCRDATE
STORE M:IRDATE TO T:IRDATE
STORE M:RIMDAT TO T:RIMDAT
STORE M:CLOSE TO T:CLOSE
STORE M:REOPEN TO T:REOPEN


***** THIS SEQUENCE CALCULATES THE UPPER AND LOWER YEARS FOR
***** INPUT AND IS BASED ON THE CURRENT JULIAN DATE
***** U:LLIMIT= YEAR MINUS TWO YEARS
***** U:ULIMIT = YEAR PLUS ONE YEAR

STORE $(C:JULIAN,1,2) TO TEMP1
STORE VAL(TEMP1) TO TEMP1A
STORE VAL('2') TO LOW
STORE VAL('1') TO HIGH
STORE TEMP1A-LOW TO LLMT
STORE TEMP1A+HIGH TO ULMT
STORE STR(LLMT,2) TO U:LLIMIT
STORE STR(ULMT,2) TO U:ULIMIT
RELEASE TEMP1,TEMP1A,LOW,HIGH,LLMT,ULMT
ERASE

@  3,2 SAY '     DATES CURRENTLY IN FILE FOR CASE
'
@  3,45 SAY  M:CASE
@  8,2 SAY '        DISCOVERY DATE               'GET M:DDATE
@  9,2 SAY '        RECEIVED FROM ORIGIN         'GET M:RDATE
@ 10,2 SAY '        OPENING DATE               * '
@ 10,36 SAY  M:OPEN
@ 11,2 SAY '        TRANSMITTAL DATE             'GET M:LDATE
@ 12,2 SAY '        SCREEN REPORT DATE           'GET M:SCRDATE
@ 13,2 SAY '        INTERIM RESPONSE DATE        'GET M:IRDATE
@ 14,2 SAY '        RETURN FROM ITEM MGR         'GET M:RIMDAT
@ 15,2 SAY '        CLOSE                      * '
@ 15,36 SAY M:CLOSE
@ 16,2 SAY '        REOPEN                       'GET M:REOPEN
@ 18,2 SAY '  <* MAY NOT CHANGE THESE DATES>      '
CLEAR GETS

    STORE ' ' TO U:REPLY
    STORE T TO U:DATET
    DO WHILE U:DATET

        STORE  T TO U:DDATET
        DO WHILE U:DDATET

            @ 8,35 SAY ' '   GET M:DDATE
            READ
             IF M:DDATE <> '     '
                IF $(M:DDATE,1,2) < U:LLIMIT ;
                   .OR. $(M:DDATE,1,2) > U:ULIMIT;
                   .OR. $(M:DDATE,3,3) <'001' ;
                   .OR. $(M:DDATE,3,3) > '365';
                   .OR. M:DDATE > C:JULIAN
```

```
                  @ 23,30 SAY 'DATE OUT OF RANGE'
              ELSE
                  STORE F TO U:DDATET
              ENDIF
          ELSE
              STORE F TO U:DDATET
          ENDIF <BLANK>
ENDDO <U:DDATET>
@ 23,30 SAY '                              '

STORE  T TO U:RDATET
DO WHILE U:RDATET

    @ 9,35 SAY ' '   GET M:RDATE
    READ
    IF $(M:RDATE,1,2) < U:LLIMIT ;
        .OR. $(M:RDATE,1,2) > U:ULIMIT ;
        .OR. $(M:RDATE,3,3) <'001' ;
        .OR. $(M:RDATE,3,3) > '365';
        .OR. M:RDATE > C:JULIAN ;
        .OR. M:RDATE < M:DDATE ;
        .OR. M:RDATE >M:OPEN
           @ 23,30 SAY 'DATE OUT OF RANGE'
    ELSE
           STORE F TO U:RDATET
    ENDIF
ENDDO <U:RDATET>
@ 23,30 SAY '                              '
RELEASE U:DDATET,U:RDATET

STORE  T TO U:LDATET
DO WHILE U:LDATET

    @ 11,35 SAY ' '   GET M:LDATE
    READ
    IF M:LDATE <> '      '
        IF $(M:LDATE,1,2) < U:LLIMIT ;
            .CR. $(M:LDATE,1,2) > U:ULIMIT ;
            .CR. $(M:LDATE,3,3) <'001' ;
            .CR. $(M:LDATE,3,3) > '365' ;
            .CR. M:LDATE > C:JULIAN ;
            .CR. M:LDATE < M:OPEN
               @ 23,30 SAY 'DATE OUT OF RANGE'
        ELSE
               STORE F TO U:LDATET
        ENDIF
    ELSE
        STORE F TO U:LDATET
    ENDIF
ENDDO <U:LDATET>
@ 23,30 SAY '                              '

STORE  T TO U:SCDATET
DO WHILE U:SCDATET

    @ 12,35 SAY ' '   GET M:SCRDATE
    READ
    IF M:SCRDATE <> '      '

        IF $(M:SCRDATE,1,2) < U:LLIMIT ;
            .CR. $(M:SCRDATE,1,2) > U:ULIMIT ;
            .CR. $(M:SCRDATE,3,3) <'001' ;
            .CR. $(M:SCRDATE,3,2) > '365';
            .CR. M:SCRDATE < M:LDATE
               @ 23,30 SAY 'DATE OUT OF RANGE'
        ELSE
           STORE F TO U:SCDATET

        ENDIF
    ELSE
       STORE F TO U:SCDATET
    ENDIF
ENDDO <U:SCDATET>
@ 23,30 SAY '                                        '
RELEASE U:LDATET,U:SCDATET

STORE  T TO U:IRDATET
DO WHILE U:IRDATET

    @ 13,35 SAY ' '   GET M:IRDATE
    READ
    IF M:IRDATE <> '     '

       IF $(M:IRDATE,1,2) <U:LLIMIT ;
          .OR. $(M:IRDATE,1,2) > U:ULIMIT;
          .OR. $(M:IRDATE,3,3) <'001' ;
          .OR. $(M:IRDATE,3,3) > '365';
          .OR. M:IRDATE < M:OPEN
             @ 23,30 SAY 'DATE OUT OF RANGE'
       ELSE
          STORE F  TO U:IRDATET
       ENDIF
    ELSE
       STORE F TO U:IRDATET
    ENDIF
ENDDO <U:IRDATET>
@ 23,30 SAY '                                        '

STORE  T TO U:RIMDATT
DO WHILE U:RIMDATT

    @ 14,35 SAY ' '   GET M:RIMDAT
    READ
    IF M:RIMDAT <> '     '

       IF $(M:RIMDAT,1,2) <U:LLIMIT ;
          .OR. $(M:RIMDAT,1,2) > U:ULIMIT;
          .OR. $(M:RIMDAT,3,3) <'001' ;
          .OR. $(M:RIMDAT,3,3) > '365'
             @ 23,30 SAY 'DATE OUT OF RANGE'
       ELSE
          IF M:RIMDAT < M:LDATE
             @ 23,30 SAY ' RTN DATE NOT ';
               +'BEFORE TRANSMITTAL DATE'
          ELSE
             STORE F TO U:RIMDATT
          ENDIF
       ENDIF
    ELSE
       STORE F TO U:RIMDATT
    ENDIF
ENDDO <U:RIMDATT>
@ 23,30 SAY '                                                       ';
   +'                 '
RELEASE U:IRDATET,U:RIMDATT

STORE  T TO U:REOPENT
DO WHILE U:REOPENT

    @ 16,35 SAY ' '   GET M:REOPEN
    READ
    IF M:REOPEN <> '     '

       IF $(M:REOPEN,1,2) <U:LLIMIT ;
          .OR. $(M:REOPEN,1,2) > U:ULIMIT;
          .OR. $(M:REOPEN,3,3) <'001' ;
          .OR. $(M:REOPEN,3,3) > '365'
          @ 23,30 SAY 'DATE OUT OF RANGE'
```

```
                ELSE
                   IF M:RECPEN < M:OPEN
                       @ 23,30 SAY 'REOPEN DATE MAY NOT';
                              +' BE LESS THAN OPEN DATE !'
                   EISE
                       STORE F TO U:REOPENT
                   ENDIF
                ENDIF
            ELSE
                STORE F TO U:REOPENT
            ENDIF
        ENDDO <U:RECPENT>
        @ 23,30 SAY '                                    ';
               +'                     '
  STORE T TO U:END
DO WHILE U:END
  @ 21,10 SAY '     *****   CHECK DATES ABOVE   *****    '
  @ 22,10 SAY '<CHOCSE> 1- CONTINUE   2- CHANGE   3-EXIT'
  @ 23,10 SAY '                  ' GET U:REPLY PICTURE '9'
  READ
  IF U:REPLY <> '1'.AND. U:REPLY <> '2'.AND.U:REPLY <> '3'
        @ 22,10 SAY ' ANSWER WITH A  1 - 2 - 3  ONLY'
    ELSE
        STORE F TO U:END
    ENDIF
  ENDDO <U:END>
  @ 21,10 SAY '                                           '
  @ 22,10 SAY '                                           '
  @ 23,10 SAY '                                           '
  RELEASE U:REOPENT,U:END

  IF U:REPLY ='1'
      STORE F TO U:DATET
      STORE T TO U:CCNT1
      IF M:DDATE <> T:DDATE .OR. M:RDATE <> T:RDATE ;
         .CR. M:OPEN <> T:OPEN .OR.M:LDATE <> T:LDATE ;
         .CR. M:SCRDATE <> T:SCRDATE ;
         .CR. M:IRDATE <> T:IRDATE.OR.M:RIMDAT<>T:RIMDAT ;
         .CR. M:CLOSE <> T:CLOSE .OR. M:REOPEN <>T:REOPEN
              STORE '*' TO M:DATECI
      EISE
         STORE ' ' TO M:DATECI
      ENDIF
      RELEASE ALL LIKE T:*
      STORE M:DDATE+M:RDATE+M:OPEN+M:LDATE+M:SCRDATE;
            +M:IRDATE+M:RIMDAT+M:CLOSE+M:REOPEN+M:DATECI;
            TO M:DATES
      RELEASE M:DDATE,M:RDATE,M:OPEN,M:LDATE,M:SCRDATE,;
              M:IRDATE,M:RIMDAT,M:CLOSE,M:REOPEN,M:DATECI


  ELSE
       IF U:REPLY ='3'
          STORE F TC U:DATET
          STORE F TC U:CONT1
          STORE F TC U:CONT2
          STORE F TC U:CONT3
          IF U:FILE = 'OPEN'
              STORE '1G' TO M:TYPE
          ELSE
              STORE '3G' TO M:TYPE
          ENDIF
          DO C:XDBHNDLR
          RELEASE ALL EXCEPT C:*
          RETURN
       ENDIF

  ENDIF
```

```
ENDDO <U:DATET>
RELEASE U:DATET,U:END

ERASE

DO WHILE U:CONT1

***** DISPLAY OF CASE DATA FROM FIRST DATABASE

@  1,2 SAY '         NSN:'
@  1,17  SAY $(M:NSN,1,4)+'-'+$(M:NSN,5,2)+'-';
           +$(M:NSN,7,3)+'-'+$(M:NSN,10,4)
@  1,42 SAY 'CAT ' GET M:CAT
@  1,55 SAY 'CASE NUMBER:'
@  1,67 SAY  M:CASE
@  2,2 SAY '         COG                              ' GET M:COG ;
       PICTURE 'XX'
@  2,41 SAY 'SMIC ' GET M:SM PICTURE 'AX'
@  3,2 SAY '         UIC                              ' GET M:UIC
@  4,2 SAY '         REPORT CONTROL
           ';
       GET M:REPCON PICTURE 'XXXXXX999999'
@  5,2 SAY '         ACTION POINT                     ' GET M:ACTPT;
       PICTURE 'AXXXXX99999'
@  6,2 SAY '         NOMENCLATURE                     ';
       GET M:NOMEN PICTURE 'XXXXXXXXXXXXXXXXXX'
@  7,2 SAY '         FSCM                             ';
       GET M:FSCM PICTURE 'XXXXXX'
@  8,2 SAY '         CONTRACT
           ';
       GET M:NUM PICTURE 'XXXXXX99AXXXXXXXX'
@  9,2 SAY '         DOCUMENT
           ';
       GET M:DOCNO PICTURE 'XXXXXX99999999'
@ 10,2 SAY '        QUANTITY DEFICIENT                ';
       GET M:QTYDEF PICTURE '999999'
@ 11,2 SAY '        UNIT OF ISSUE                     ';
       GET M:UI PICTURE 'XX'
@ 12,2 SAY '        UNIT PRICE                        ';
       GET M:UPRC PICTURE '999999.99'
@ 13,2 SAY '        ORIGIN                            ';
       GET M:ORG PICTURE 'XXX'
@ 14,2 SAY '        9Q REGION CODE                    ';
       GET M:O9Q PICTURE 'X'
@ 15,2 SAY '         SCREEN QUANTITY                  ';
       GET M:SCRQTY PICTURE '999999'
@ 16,2 SAY '         SCREEN CODE                      ';
       GET M:SCR PICTURE 'XXX'
@ 17,2 SAY '         TYPE DOCUMENT                    ';
       GET M:DOC  PICTURE '9'
@ 18,2 SAY '         VENDOR LIABILITY CODE            ';
       GET M:VLC PICTURE 'A'
@ 19,2 SAY '         CREDIT CODE                      ';
       GET M:CR PICTURE 'A'
@ 20,2 SAY '         TYPE DEFECT                      ';
       GET M:DEF PICTURE '99'
CLEAR GETS
     STORE ' ' TO U:REPLY
     @ 22,10 SAY '            ENTER  <N> TO SKIP '
     @ 23,30 SAY ' 'GET U:REPLY
     READ

     IF !(U:REPLY) = 'N'
         STORE F TO U:FIRSTPG
         STORE F TO U:CONT1
         STORE T TO U:CONT2
         IF U:FILE ='OPEN'
```

```
            STORE '1C' TO M:TYPE
        ELSE
            STORE '3C' TO M:TYPE
        ENDIF
    ELSE
        STORE T TO U:FIRSTPG
    ENDIF
    @ 22,10 SAY '                                                      '
    @ 23,10 SAY '                                               '

***** SKIP FIRST PAGE OF UPDATE IF REPLY WAS <N>

    DO WHILE U:FIRSTPG
        STORE T TO U:CAT
        DO WHILE U:CAT
            @ 1,42 SAY 'CAT ' GET M:CAT PICTURE '9'
            READ
            IF M:CAT ='1' .OR. M:CAT ='2'
                STORE F TO U:CAT
            ELSE
                @ 23,20 SAY ' 1 OR 2 ONLY'
            ENDIF
        ENDDO U:CAT
        @ 23,20 SAY '                            '
        RELEASE U:CAT


        STORE T TO U:COG1
        STORE T TO U:COG2
        DO WHILE U:COG1 .OR. U:COG2
            DO WHILE U:COG1

                @ 2,35 SAY ' ' GET M:COG PICTURE '9X'
                READ
                STORE !(M:COG) TO M:COG
                IF $(M:COG,2,1) = ' '
                    @ 23,20  SAY ' NO BLANKS IN 2D ';
                             +'POSITION'
                ELSE
                    STORE F TO U:COG1
                ENDIF
            ENDDO <U:COG1>
            @ 23,20 SAY '                                          ';
                  +'                     '

***** CHECKS THAT COG IS VALID IN CURRENT COG TABLE... MUST
***** BE VALID TO CONTINUE

                USE D:COG INDEX D:COGS
                FIND  &M:COG
                IF   # = 0
                    @ 23,20 SAY ' COG INVALID - ENTER ';
                          +'    CORRECTED ENTRY'
                ELSE
                    STORE F  TO U:COG2
                ENDIF
        ENDDO <U:COG1 & U:COG2>
        RELEASE U:COG1, U:COG2
        @ 23,20 SAY '                                          ';
              +'              '

        IF M:COG = '1H' .OR. M:COG = '2H' .OR. M:COG = '7H'
            STORE T TO U:SMIC1
            DO WHILE U:SMIC1
                @ 2,45 SAY ' ' GET M:SM PICTURE 'AX'
                READ
                STORE !(M:SM) TO M:SM
                IF $(M:SM,1,1) = 'X' .OR.$(M:SM,1,1) = 'L'
                    STORE F TO U:SMIC1
                ELSE
                    @ 23,30 SAY 'X OR L ONLY'
                ENDIF
            ENDDO <U:SMIC1>
        ENDIF
        RELEASE  U:SMIC1
        @ 23,30 SAY '                                    '

        STORE T TO U:UIC1
        DO WHILE U:UIC1
            @ 3,35 SAY ' ' GET M:UIC PICTURE 'AXXXXX'
            READ
            IF $(M:UIC,1,1) = ' '.OR. $(M:UIC,2,1)= ' ' .OR.;
               $(M:UIC,3,1) = ' '.OR. $(M:UIC,4,1)= ' ' .OR.;
               $(M:UIC,5,1) = ' '.OR. $(M:UIC,6,1)= ' '
                    @ 23,20 SAY ' NO BLANKS ALLOWED IN UIC'
            ELSE
                STORE F TO U:UIC1
            ENDIF
        ENDDO <U:UIC1>
        @ 23,20 SAY '                                          '
        RELEASE U:UIC1

        @ 4,35 SAY ' ' GET M:REPCON PICTURE 'XXXXXX999999'
        READ

        STORE T TO U:ACTPTT
        DO WHILE U:ACTPTT
            @ 5,35 SAY ' 'GET M:ACTPT PICTURE 'AXXXXX99999'
            READ
            IF M:ACTPT= '           '
                @ 23,30 SAY 'MAY NOT BE BLANK'
            ELSE
                STORE F TO U:ACTPTT
            ENDIF
        ENDDO <U:ACTPTT>
        @ 23,30 SAY '                                       '

        STORE T TO U:NOMEN
        DO WHILE U:NOMEN
            @ 6,35 SAY ' 'GET M:NOMEN PICTURE ;
                              'XXXXXXXXXXXXXXXXXX'
            READ
            IF $(M:NOMEN,1,1) = ' ' ;
                .OR. $(M:NOMEN,2,1) = ' ';
                .OR. $(M:NOMEN,3,1) =' '
                    @ 23,30 SAY ' NO BLANKS IN FIRST 3';
                              +'  POSITIONS'
            ELSE
                    STORE F TO U:NOMEN
            ENDIF
        ENDDO <U:NOMEN>
        @ 23,30 SAY '                                     '
        RELEASE U:NOMEN

***** INPUT FSCM

       @  7,35 SAY ' ' GET M:FSCM PICTURE  'XXXXXX'

***** INPUT CONTRACT NUMBER

       @ 8,35 SAY ' 'GET M:NUM PICTURE 'XXXXXX99AXXXXXXXX'

***** INPUT DOCUMENT NUMBER

      STORE T TO U:UICT
      STORE T TO U:PREPT
      STORE T TO U:DOCT
      DO WHILE U:DOCT .OR. U:UICT
```

```
    @ 9,35 SAY ' 'GET M:DOCNO PICTURE 'XXXXXX99999999'
    READ
    IF M:DOCNO = '                    '
        STORE F TO U:DOCT
        STORE F TO U:UICT
    ELSE
        IF $(M:DOCNO,1,1) =' '.OR.$(M:DOCNO,2,1)= ' ';
            .OR. $(M:DOCNO,3,1) = ' ' ;
            .OR. $(M:DOCNO,4,1) = ' ' ;
            .OR. $(M:DOCNO,5,1) = ' '
                @ 23,20 SAY ' NO BLANKS ALLOWED IN UIC'
        ELSE
                STORE F TO U:DOCT
        ENDIF
        IF $(M:DOCNO,12,3) >'366' ;
            .OR. $(M:DOCNO,12,3) = '   ' ;
            .OR. $(M:DOCNO,11,4) = '    '
                @  23,50 SAY 'PREP DATE OUT OF RANGE '
            ELSE
                STORE F TO U:UICT
            ENDIF
        ENDIF <ALL BLANKS>
    ENDDO <U:DOCT .AND. U:UICT>
    RELEASE U:UICT,U:DOCT
    @ 23,20 SAY '                                              '

*****  DOCUMENT NUMBER END

    STORE T TO U:QTYDEF
    DO WHILE U:QTYDEF
        @ 10,35 SAY ' '  GET M:QTYDEF PICTURE '999999'
        READ
        IF M:QTYDEF < 1 .OR. M:QTYDEF > 999999
            @ 23,20 SAY ' DEFICIENT # OUT OF RANGE'
        ELSE
            STORE F TO U:QTYDEF
        ENDIF
    ENDDO U:QTYDEF
    RELEASE U:QTYDEF
    @ 23,25 SAY '                                   '

    STORE T TO U:UI
    DO WHILE U:UI
        @ 11,35 SAY ' ' GET M:UI PICTURE 'AA'
        READ
        IF $(M:UI,1,1) = ' ' .OR. $(M:UI,2,1) = ' '
            @ 23,30 SAY ' NO BLANKS'
        ELSE
            STORE F TO U:UI
        ENDIF
    ENDDO U:UI
    @ 23,30 SAY '                         '
    RELEASE U:UI

    STORE T TO U:EPRC
    STORE T TO U:UPRC
    DO WHILE U:UPRC .OR. U:EPRC
       DO WHILE U:UPRC
         @ 12,35 SAY ' 'GET M:UPRC PICTURE '999999.99'
         READ
         IF M:UPRC < .01 .OR. M:UPRC > 999999.99
             @ 23,30 SAY ' AMOUNT OUT OF RANGE '
         ELSE
             STORE F TO U:UPRC
         ENDIF
       ENDDO U:UPRC
       @ 23,30 SAY '                              '
       STORE (M:UPRC * M:QTYDEF) TO M:EPRC
       STORE T TO U:EPRC
    DO WHILE U:EPRC
       @ 12,50 SAY 'EXT PRICE $'
       @ 12,61 SAY M:EPRC  PICTURE '99999999.99'
       IF M:EPRC >= 100000000
         @ 23,30 SAY ' EXTENDED PRICE OUT OF RANGE'
       ELSE
         STORE F TO U:EPRC
       ENDIF
   ENDDO <U:EPRC>
ENDDO <U:UPRC & U:EPRC>
RELEASE U:UPRC,U:EPRC

 STORE T TO U:ORG
 DO WHILE U:ORG
     @ 13,35 SAY ' ' GET M:ORG PICTURE 'AAX'
     READ
     IF $(M:ORG,1,1) =' '.OR. $(M:ORG,2,1) = ' '
        @ 23,20 SAY ' FIRST 2 POSITIONS MAY NOT';
                    +' CONTAIN BLANKS'
     ELSE
          STORE F TO U:ORG
     ENDIF
 ENDDO <U:ORG>
 @ 23,20 SAY '                                     '
 RELEASE U:ORG

 IF M:COG ='9Q'
     STORE T TO U:9Q
     DO WHILE U:9Q
         @ 14,35 SAY ' ' GET M:O9Q PICTURE 'X'
         READ
         IF M:O9Q ='2' .OR. M:O9Q ='4' ;
            .OR. M:O9Q ='5' .OR. M:O9Q ='7';
            .OR. M:O9Q ='9' .OR. M:O9Q =' '
               STORE F TO U:9Q
         ELSE
               @ 23,30 SAY ' OUT OF RANGE'
         ENDIF
     ENDDO <U:9Q>
     @ 23,30 SAY '                                     '
     RELEASE U:9Q
 ENDIF <M:COG = 9Q>

 @ 15,35 SAY ' ' GET M:SCRQTY PICTURE '999999'
 READ


 @ 16,35 SAY ' ' GET M:SCR PICTURE 'XXX'
 READ

 STORE T TO U:DOC
 DO WHILE U:DOC

     @ 17,35 SAY ' ' GET M:DOC PICTURE '9'
     READ
     IF M:DOC < '1' .OR. M:DOC > '7'
         @ 23,30 SAY ' 1 THROUGH 7 ONLY'
     ELSE
         STORE F TO U:DOC
     ENDIF
 ENDDO <U:DOC>
 @ 23,30 SAY '                              '
 RELEASE U:DOC

 @ 18,35 SAY ' ' GET M:VLC PICTURE 'A'

 @ 19,35 SAY ' ' GET M:CR PICTURE 'A'

 @ 20,35 SAY ' ' GET M:DEF PICTURE '99'
```

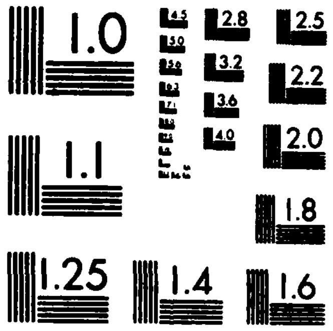
```
                READ

                STORE T TO U:END
                DO WHILE U:END

                    STORE ' ' TO U:REPLY
                    @ 22,10 SAY '<CHOOSE> 1- CONTINUE   2- CHANGE';
                               +'   3- EXIT'
                    @ 23,30 SAY ' 'GET U:REPLY PICTURE '9'
                    READ
                    IF U:REPLY <> '1' .AND. U:REPLY <> '2' .AND.;
                        U:REPLY <> '3'
                         @ 23,10 SAY 'ANSWER WITH A 1 - 2 - 3  ONLY'
                   ELSE
                         STORE F TO U:END
                    ENDIF
                ENDDO <U:END>
                @ 23,10 SAY '                                    '

                IF U:REPLY = '2'
                    STORE T TO U:FIRSTPG
                    @ 22,10 SAY '                                          '
                    @ 23,10 SAY '                                          '
                ELSE
                    IF U:REPLY ='3'

                         STORE F TO U:FIRSTPG
                         STORE F TO U:CONT1
                         STORE F TO U:CONT2
                         STORE F TO U:CONT3
                         IF U:FILE = 'OPEN'
                              STORE '1G' TO M:TYPE
                         ELSE
                             STORE '3G' TO M:TYPE
                         ENDIF
                         DO C:XDBHNDLR
                         RELEASE ALL EXCEPT C:*
                         RETURN
                    ELSE

                         STORE F TO U:FIRSTPG
                         STORE T TO U:CONT2
                         STORE F TO U:CONT1
                         IF U:FILE = 'OPEN'
                              STORE '1C' TO M:TYPE
                         ELSE
                              STORE '3C' TO M:TYPE
                         ENDIF

                    ENDIF
                ENDIF
           ENDDO <U:FIRSTPG>
           ERASE
           RELEASE U:END,U:COUNT,U:FIRSTPG

***** CHOICE ABOVE ALLOWS ANALYST TO ABANDON OR TO POST
***** CHANGES MADE THUS FAR

ENDDO <U:CONT1>
RELEASE U:CONT1

IF U:REPLY <> '3'
     @ 10,20 SAY 'RECORD BEING PARTIALLY UPDATED'
     @ 12,20 SAY '       PLEASE STANDBY          '

***** WRITE DATA TO OPEN1/CLOSE1 AND RELEASE UNNECESSARY
***** VARIABLES BEFORE READING OPEN2/CLOSE2 FOR FURTHER
***** UPDATE INFORMATION
```

```
        DO C:XDBHNDLR
        RELEASE M:COG,M:CAT,M:NOMEN,M:UIC,M:UI,M:QTY[illegible]
                M:EPFC,M:CRG,M:DOC,M:DOCHD,M:DATES,M:[illegible]
                M:FSCM,M:NUM,M:CF,M:SCR,M:SM
        RELEASE M:ORQ,M:DEF,M:VLC,M:ACTPT,SCRQTY,M:[illegible]

        IF U:FILE = 'OPEN'
           STORE '2E' TO M:TYPE
        ELSE
           STORE '4E' TO M:TYPE
        ENDIF
        DO C:XDBHNDLR
     ENDIF

     DO WHILE U:CONT2

     STORE $(M:DITEM,1,7) TO U:TYPE
     STORE $(M:DITEM,8,6) TO U:SERNO
     STORE $(M:DITEM,14,10) TO U:HASSY
     STORE $(M:DITEM,24,12) TO U:SASSY
     STORE '      ' TO M:OVER

     ***** DISPLAY FOR SECOND SCREEN OF UPDATE PROGRAM

     ERASE

     @  1,2 SAY '        NSN:'
     @  1,16  SAY $(M:NSN,1,4)+'-'+$(M:NSN,5,2)+'-'+$(M:NSN,7,3);
              +'-'+$(M:NSN,10,4)
     @  1,55 SAY 'CASE NUMBER:'
     @  1,67 SAY M:CASE
     @  2,2 SAY '       MFG. PART NUMBER                ' GET M:MFG ;
            PICTURE 'XXXXXXXXXXXXXXX'
     @  3,2 SAY '       SERIAL/LOT/BATCH                ' GET M:LOT ;
            PICTURE 'XXXXXXXXX'
     @  4,2 SAY '       ITEM          N OR O            ' GET M:ITEM;
            PICTURE 'A'
     @  5,2 SAY '       DATE MFG/REP/OVHL               ' GET M:OVER;
            PICTURE '99999'
     @  6,2 SAY '       OPN TIME AT FAILURE             ' GET M:OTF ;
            PICTURE 'AXXXX'
     @  7,2 SAY '       GOV FURNISHED MATL              ' GET M:GOV ;
            PICTURE 'A'
     @  8,2 SAY '       QUANTITY: RECV/INSP/STK         'GET M:QTYREC;
            PICTURE '999999'
     @ 8,43 SAY '/' GET M:QTYINS PICTURE '999999'
     @ 8,50 SAY '/' GET M:QTYSTK PICTURE '999999'
     @  9,2 SAY '       TYPE/MODEL/SERIES               ' GET U:TYPE ;
            PICTURE 'XXXXXXX'
     @ 10,2 SAY '       SERIAL NUMBER                   ' GET U:SERNO;
            PICTURE 'XXXXXX'
     @ 11,2 SAY '       NEXT HIGHER ASSY                ' GET U:HASSY;
            PICTURE 'XXXXXXXXXX'
     @ 12,2 SAY '       SUB-ASSEMBLY                    ' GET U:SASSY;
            PICTURE 'XXXXXXXXXXXX'
     @ 13,2 SAY '       ESTIMATED CORRECTION COST       ' GET M:CCOST;
            PICTURE '99999999.99'
     @ 14,2 SAY '       WORK UNIT CODE                  ' GET M:WUC ;
            PICTURE 'XXXXXXX'
     @ 15,2 SAY '       DEFECT VERIF   - N/O/U/Y        ' GET M:DEFV;
            PICTURE 'A'
     @ 16,2 SAY '       DEFECT RESP    - C/N/S/U/X      ' GET M:DEFR ;
            PICTURE 'A'
     @ 17,2 SAY '       STATUS CODE                     ' GET ;
            M:STATUSC PICTURE 'AA'
     @ 18,2 SAY '       CAUSE CODE                      ' GET ;
            M:CAUSEC PICTURE 'A'
     @ 19,2 SAY '       ACTION/DISP -H/I/D/R/O          ' GET ;
```

```
      M:ACTDISP PICTURE 'X'
@ 20,2 SAY '        WARRANTY ' GET M:WNTY PICTURE 'A'
@ 20,19 SAY 'COST CODE ' GET M:COSTC PICTURE 'A'
@ 20,30 SAY ' ACTION CODE' GET M:ACTTKN PICTURE 'AAA'
@ 21,2 SAY '        RETURN CODE                  ' GET M:RTTC ;
      PICTURE '9'
CLEAR GETS

      @ 22,10 SAY '              ENTER  <N> TO SKIP '
      @ 23,30 SAY ' ' GET U:REPLY
      READ
      IF !(U:REPLY) = 'N'
           STORE F TO U:PAGE2
           STORE F TO U:CONT2
           STORE T TO U:CONT3
      ELSE
           STORE T TO U:PAGE2
      ENDIF
      @ 22,10 SAY '                                          '
      @ 23,10 SAY '                                          '
      DO WHILE U:PAGE2

***** INPUT MANUFACTURERS PART NUMBER

      @  2,35 SAY ' ' GET M:MFC PICTURE 'XXXXXXXXXXXXXXXXXX'
      @  3,35 SAY ' ' GET M:LOT PICTURE 'XXXXXXXXX'

           STORE T TO U:ITEM
           DO WHILE U:ITEM

                @  4,35 SAY ' ' GET M:ITEM PICTURE 'A'
                READ
                IF M:ITEM = 'N' .OR. M:ITEM = 'O' ;
                    .OR. M:ITEM = ' '
                         STORE F TO U:ITEM
                ELSE
                         @ 23,30 SAY ' USE N OR O '
                ENDIF
           ENDDO  <U:ITEM>
           @ 23,30 SAY '                                          '
           RELEASE U:ITEM
           IF M:ITEM <> ' '

***** THE NEXT FIVE LINES CALCULATE EARLIEST YEAR TO ALLOW
***** FOR OVERHAUL ENTRY

           STORE $(C:JULIAN,1,2) TO TEMP1
           STORE VAL(TEMP1) TO TEMP1A
           STORE VAL('10') TO LOW
           STORE TEMP1A-LOW TO TEMP2
           STORE STR(TEMP2,2) TO U:TENYRS
           RELEASE TEMP1,TEMP1A,TEMP2,LOW

           STORE T TO U:OVER
           DO WHILE U:OVER
                @  5,35 SAY ' ' GET M:OVER PICTURE '99999'
                READ
                IF $(M:OVER,3,3) > '365' ;
                    .OR. $(M:OVER,1,2) < U:TENYRS ;
                    .OR. $(M:OVER,1,2) > U:ULIMIT
                         @ 23,30 SAY 'DATE OUT OF RANGE'
                ELSE
                         STORE F TO U:OVER
                ENDIF
           ENDDO <U:OVER>
           ENDIF
           RELEASE U:OVER,U:TENYRS
```

AD-A143 875 THE CREATION OF A CENTRAL DATABASE ON A MICROCOMPUTER 2/3
NETWORK(U) NAVAL POSTGRADUATE SCHOOL MONTEREY CA
J G BOYNTON ET AL. MAR 84

UNCLASSIFIED F/G 9/2 NL


1.0
2.8
2.5
3.2
2.2
3.6
4.0
2.0
1.1
1.8
1.25
1.4
1.6

```
STORE T TO U:OTF
DO WHILE U:OTF
     @  6,35 SAY ' ' GET M:OTF PICTURE 'A9999'
     READ
     IF M:OTF = '     '
          STORE F TO U:OTF
     ELSE
          IF $(M:OTF,1,1) = 'N'.OR.$(M:OTF,1,1) ='C';
               .AND. $(M:OTF,2,4) > '0000'
                    STORE F TO U:OTF
          ELSE
                    @ 23,30 SAY ' USE  N OR O AND THEN
                                   TIME  (A9999)'
          ENDIF
     ENDIF
ENDDO  <U:OTF>
@ 23,30 SAY '                                               '
RELEASE U:OTF

STORE T TO U:GOV
DO WHILE U:GOV
     @  7,35 SAY ' ' GET M:GOV PICTURE 'A'
     READ
     IF M:GOV = ' ' .OR.  M:GOV = 'Y'.OR. M:GOV ='N'
          STORE  F TO U:GOV
     ELSE
          @ 23,30 SAY 'USE EITHER Y OR N'
     ENDIF
ENDDO <U:GOV>
@ 23,30 SAY '                                                 '
RELEASE U:GOV

STORE T TO U:QTYRECT
DO WHILE U:QTYRECT

     @  8,35 SAY ' ' GET M:QTYREC  PICTURE '999999'
     READ
     IF M:QTYREC < 0 .OR. M:QTYREC > 999999
          @ 23,30 SAY 'OUT OF RANGE'
     ELSE
          STORE F TO U:QTYRECT
     ENDIF
ENDDO
@ 23,30 SAY '                                             '
RELEASE U:QTYRECT
STORE T TO U:QTYINS
DO WHILE U:QTYINS
     @  8,43 SAY '/' GET M:QTYINS  PICTURE '999999'
     READ
     IF M:QTYINS < 0 .OR. M:QTYINS > 999999
          @ 23,30 SAY ' OUT OF RANGE'
     ELSE
          STORE F TO U:QTYINS
     ENDIF
ENDDO <U:QTYINS>
@ 23,30 SAY '                                               '
RELEASE U:QTYINS

STORE T TO U:QTYSTK
DO WHILE U:QTYSTK
     @  8,50 SAY  '/' GET M:QTYSTK  PICTURE '999999'
     READ
     IF M:QTYSTK < 0 .OR. M:QTYSTK  > 999999
          @ 23,30 SAY 'IN STOCK # OUT OF RANGE'
     ELSE
          STORE F TO U:QTYSTK
     ENDIF
```

```
ENDDO U:<QTYSTK>
@ 23,30 SAY '                                        '
RELEASE U:QTYSTK

@ 9,35 SAY ' ' GET U:TYPE PICTURE 'XXXXXXX'

@ 10,35 SAY ' ' GET U:SERNO PICTURE 'XXXXXX'

@ 11,35 SAY ' ' GET U:HASSY PICTURE 'XXXXXXXXXX'

@ 12,35 SAY ' ' GET U:SASSY PICTURE 'XXXXXXXXXXXX'
READ

STORE U:TYPE+U:SERNO+U:HASSY+U:SASSY TO M:DITEM

@ 13,35 SAY ' ' GET M:CCOST PICTURE '999999999.99'
READ

@ 14,35 SAY ' ' GET M:WUC PICTURE 'XXXXXXX'
READ

@ 15,35 SAY ' ' GET M:DEFV PICTURE 'A'

STORE T TO U:DEFV
DO WHILE U:DEFV
    @ 15,35 SAY ' ' GET M:DEFV PICTURE 'A'
    READ
    IF M:DEFV = 'N' .OR. M:DEFV = 'O' ;
        .OR. M:DEFV = 'U' .OR. M:DEFV= 'Y' ;
        .OR. M:DEFV = ' '
         STORE F TO U:DEFV
    ELSE
         @ 23,30 SAY ' CORRECT CODE MUST BE ENTERED'
    ENDIF
ENDDO <U:DEFV>
@ 23,30 SAY '                                          '
RELEASE U:DEFV

STORE T TO U:DEFR
DO WHILE U:DEFR
    @ 16,35 SAY ' ' GET M:DEFR PICTURE 'A'
    READ
    IF M:DEFR = 'C' .OR. M:DEFR = 'N' ;
        .OR. M:DEFR = 'S' .OR. M:DEFR = 'U' ;
        .OR. M:DEFR = 'X' .OR. M:DEFR = ' '
         STORE F TO U:DEFR
    ELSE
         @ 23,30 SAY 'CORRECT CODE MUST BE ENTERED'
    ENDIF
ENDDO <U:DEFR>
@ 23,30 SAY '                                              '
RELEASE U:DEFR

@ 17,35 SAY ' ' GET M:STATUSC PICTURE 'AA'
READ

@ 18,35 SAY ' ' GET M:CAUSEC PICTURE 'A'
READ

@ 19,35 SAY ' ' GET M:ACTDISP PICTURE 'X'
READ

STORE T TO U:WNTY
DO WHILE U:WNTY
    @ 20,2 SAY '       WARRANTY 'GET M:WNTY
    READ
    IF M:WNTY = 'Y' .OR. M:WNTY ='N' ;
        OR. M:WNTY = 'U'
          STORE F TO U:WNTY
```

```
              ELSE
                   @ 23,30 SAY 'Y, U OR N ONLY'
              ENDIF
          ENDDO
          @ 23,30 SAY '                                        '
          RELEASE U:WNTY

          @ 20,19 SAY 'COST CODE ' GET M:COSTC PICTURE 'A'

          @ 20,30 SAY 'ACTION CODE'GET M:ACTTKN PICTURE 'AAA'
          @ 21,35 SAY ' ' GET M:RETC PICTURE '9'
          READ

          STORE T TO U:END
          DO WHILE U:END

               STORE ' ' TO U:REPLY
               @ 22,10 SAY '     <CHOOSE> 1- CONTINUE   2- CHANGE'
               @ 23,35 SAY ' ' GET U:REPLY PICTURE '9'
               READ
               IF U:REPLY <> '1' .AND. U:REPLY <> '2'
                      @ 23,C5 SAY 'ANSWER WITH A 1 OR 2 ONLY '
               ELSE
                      STORE F TO U:END
               ENDIF
          ENDDO <U:END>
          @ 23,05 SAY '                                              '

          IF U:REPLY = '2'
                STORE T TO U:PAGE2
                @ 22,10 SAY '                                        '
                @ 23,10 SAY '                                        '
          ELSE
                STORE F TO U:CONT2
                STORE T TO U:CONT3
                STORE F TO U:PAGE2
          ENDIF
      ENDDO <U:PAGE2>
      ERASE
      RELEASE U:TYPE,U:SERNO, U:SASSY, U:HASSY,U:END,U:PAGE2
ENDDO <U:CONT2>

***** START OF THE THIRD SCREEN FOR THE UPDATE PROGRAM

ERASE
 DO WHILE U:CONT3

***** DISPLAY OF CASE DATA FROM OPEN2 DETAILS & REPLY

      @  1,2 SAY '       NSN:'
      @  1,17  SAY $(M:NSN,1,4)+'-'+$(M:NSN,5,2)+'-';
                  +$(M:NSN,7,3)+'-'+$(M:NSN,10,4)
      @  1,55 SAY 'CASE NUMBER: '
      @  1,68 SAY M:CASE
      @  5,2  SAY 'DETAILS OF DISCREPANCY - FIRST 2 LETTERS'
      @  6,10 SAY '      MUST BE WHERE DISCOVERED CODE'
      @  8,10 SAY ' ' GET M:DETAILS
      @ 13,2  SAY 'REPLY FROM ITEM MANAGER'
      @ 14,10 SAY ' ' GET M:REPLY
      CLEAR GETS


         STORE ' ' TO U:REPLY
         @ 22,10 SAY '      ENTER  <N> TO SKIP  & UPDATE RECORD'
         @ 23,30 SAY ' 'GET U:REPLY
         READ
            IF !(U:REPLY) = 'N'
               STORE F TO U:PAGE3
               STORE F TO U:CONT3
            ELSE
               STORE T TO U:PAGE3
            ENDIF
            @ 22,10 SAY '                                        ':
                  +'                     '

***** SKIP THIRD PAGE OF UPDATE IF REPLY WAS <N>

      DO WHILE U:PAGE3

         STORE T TO U:DISCODE
         DO WHILE U:DISCODE

            @ 8,10 SAY ' ' GET M:DETAILS
            READ
            STORE  $(M:DETAILS,1,2) TO M:DIS
            USE D:WHEREDIS INDEX D:DISCODE
            FIND &M:DIS
            IF  # = C
               @ 23,30 SAY 'WHERE DISCOVERED CODE INCORRECT'
            ELSE
                STORE F TO U:DISCODE
            ENDIF
         ENDDO <U:DISCODE>
         @ 23,30 SAY '                                        '
         RELEASE U:DISCODE

         @ 14,10 SAY ' ' GET M:REPLY
         READ
         STORE T TO U:END
         DO WHILE U:END
            STORE ' ' TO U:REPLY
            @ 21,10 SAY '   *******   CHECK PREVIOUS';
                      +' ENTRIES  ******* '
            @ 22,10 SAY '           <CHOOSE> 1- CONTINUE ';
                       +'  2- CHANGE '
            @ 23,35 SAY ' ' GET U:REPLY
            READ
            IF U:REPLY <> '1' .AND. U:REPLY <> '2'
               @ 23,10 SAY ' ANSWER WITH A 1 OR 2 ONLY'
            ELSE
               STORE F TO U:END
            ENDIF
        ENDDO <U:END>
          @ 23,10 SAY '                                       '
          IF U:REPLY = '2'
             STORE T TO U:PAGE3
             @ 22,10 SAY '                                       '
             @ 23,10 SAY '                                       '
          ELSE
             STORE F TO U:PAGE3
             STORE F TO U:CONT3
          ENDIF
      ENDDO <U:PAGE3>
      RELEASE U:PAGE3,U:COUNT
      ERASE

ENDDO <U:CONT3>
      IF U:REPLY <> '3'
          @ 10,20  SAY 'YOUR CASE IS BEING UPDATED NOW'
          @ $+2,20 SAY '      PLEASE STANDBY            '
      ENDIF
      IF U:REPLY <> '3'
          IF U:FILE = 'OPEN'
             STORE '2C' TO M:TYPE
```

```
              ELSE
                 STORE '4C' TO M:TYPE
              ENDIF
              DO C:XDBHNDIR
           ENDIF

        RELEASE U:CONT3,U:REPLY,U:END
        RELEASE ALL EXCEPT C:*
        STORE T TO U:UPDATE
     ENDDO <U:UPDATE>
     RETURN

     *****  END OF PROGRAM
```

VI. CASE CLOSING MODULE

```
****************************************************************
**                                                            **
**   Date: 18 December  1984                                  **
**   Version: 1.0                                             **
**   Module Name: CLOSREC                                     **
**   Module Purpose: Close Current Case                       **
**   Module Interface Definition                              **
**      Inputs: C:WHO, C:JULIAN                               **
**      Outputs: None                                         **
**   Module Processing Narrative Description:                 **
**                                                            **
**       Prompts the Analyst for the desired closing date    **
**       to assign to the case and then for the case          **
**       number.  The database is searched and                **
**       reads current values.  Insures that there are        **
**       transmittal and return dates assigned. If not        **
**       then the case must be updated before closing.        **
**       If dates are present, the credit code and vendor    **
**       liability codes must be entered in response to       **
**       the prompts.  The case is then written to the        **
**       CLOSE1 and CLOSE2 Databases and is marked for        **
**       deletion in the OPEN1 and OPEN2.                     **
**                                                            **
**   Superordinate Modules: MENU1                             **
**   Subordinate Modules: XDBHNDLR                            **
**   Author: J.G. BOYNTON                                     **
**                                                            **
****************************************************************
ERASE
STORE T TO CL:CLOSE
DO WHILE CL:CLOSE
TEXT
                              *****  CLOSE CASE  *****


                            This program enables you to

                                CLOSE A QDR CASE



                                 1 - Continue

                                 2 - Return to Menu
ENDTEXT

    STORE ' ' TO CL:REPLY
    @ 20,38 SAY ' ' GET CL:REPLY
    READ
    DO WHILE CL:REPLY <> '1' .AND. CL:REPLY <> '2'
            @ 23,20 SAY '        ANSWER WITH A 1 OR 2 ONLY'
            @ 20,38 SAY ' ' GET CL:REPLY
            READ
    ENDDO <CL:REPLY>

    ERASE
    IF CL:REPLY = '2'
         RELEASE ALL EXCEPT C:*
```

```
            RETURN
        ENDIF

        STORE '        ' TO LC:CLDATE
        STORE '        ' TO M:CASE
        STORE ' ' TO CL:VIC
        STORE ' ' TO CL:CH

            @ 10,25 SAY '*****  CLOSE CASE  *****'
            STORE T TO CL:DATET
            DO WHILE CL:DATET

                @ 14,26 SAY 'CLOSING DATE   MMDDYY  ';
                            GET LC:CLDATE
                READ
                IF LC:CLDATE = '      '
                     RELEASE ALL EXCEPT C:*
                     RETURN
                ENDIF

                STORE $(LC:CLDATE,5,2) TO CL:TEMP1
                STORE VAL(CL:TEMP1)-1 TO CL:LOWDATE
                STORE STR(CL:LOWDATE,2) TO CL:LDATE

                IF $(LC:CLDATE,1,2) <'01';
                   .OR. $(LC:CLDATE,1,2) > '12';
                   .OR. $(LC:CLDATE,3,2) <'01' ;
                   .OR. $(LC:CLDATE,3,2) > '31';
                   .OR. $(LC:CLDATE,5,2)>$(C:JULIAN,1,2)

                        @ 23,30 SAY ' DATE OUT OF RANGE'
                ELSE
                     STORE F TO CL:DATET
                ENDIF
            ENDDO <CL:DATET>
            @ 23,30 SAY '                                    '
            RELEASE CL:DATET,CL:LDATE,CL:LOWDATE,CL:TEMP1

         STORE T TO CL:MORE
         DO WHILE CL:MORE

                     @ 10,25 SAY ' *****  CLOSE CASE  *****     '
                     @ 14,26 SAY 'CLOSING DATE   MMDDYY  ';
                             GET LC:CLDATE
                     CLEAR GETS

            STORE T TO CL:REPLY
            DO WHILE CL:REPLY
                @ 15,26 SAY 'CASE NUMBER                 ';
                        GET M:CASE PICTURE '999999X'
                READ
                USE D:OPEN1 INDEX  D:OCASE1
                FIND &M:CASE
                IF # = 0
                     STORE ' ' TO CL:AGAIN
                     @ 20,22 SAY '   That Case Not In Open File'
                     @ 22,18 SAY ' 1-To Try Again  2-To Return';
                             +' To Menu'
                     @ 23,33 SAY ' ' GET CL:AGAIN
                     READ
                     IF CL:AGAIN <> '1'
                         RELEASE ALL EXCEPT C:*
                         RETURN
                     ENDIF
                ELSE

                     IF .NOT. *
                          STORE F TO CL:REPLY
                STORE T TO CL:FILLED
            ENDIF
            IF *
                STORE ' ' TC CL:AGAIN
                @ 20,22 SAY '         That CASE Already';
                        +' CLOSED'
                @ 22,22 SAY '  1-To Try Again 2-To ';
                        +'Return To Menu'
                @ 23,33 SAY ' ' GET CL:AGAIN
                READ
                IF CL:AGAIN<>'1'
                    RELEASE ALL EXCEPT C:*
                    RETURN
                ENDIF
            ENDIF

        ENDIF
    ENDDO <CL:REPLY>
    @ 20,22 SAY '                                                   ';
            +'                      '
    @ 22,18 SAY '                                                   ';
            +'                      '
    @ 23,33 SAY '                                                   ';
            +'                      '

***** GO TO THE OPEN CASE FILE  AND READ THE CURRENT VLC
***** AND CREDIT CODE

    STORE M:CASE TO M:KEY
    STORE '1E' TO M:TYPE
    DO C:XDBHNDLR

    STORE $(M:DATES,1,5)  TO M:DDATE
    STORE $(M:DATES,6,5)  TO M:RDATE
    STORE $(M:DATES,11,5)  TO M:OPEN
    STORE $(M:DATES,16,5)  TO M:LDATE
    STORE $(M:DATES,21,5)  TO M:SCRDATE
    STORE $(M:DATES,26,5)  TO M:IRDATE
    STORE $(M:DATES,31,5)  TO M:RIMDAT
    STORE $(M:DATES,36,5)  TO M:CLOSE
    STORE $(M:DATES,41,5)  TO M:REOPEN

    IF M:RDATE ='     '.OR. M:OPEN='     '.OR. ;
             M:LDATE='     '.OR. M:RIMDAT = '     '
        @ 20,20 SAY 'Key Date/Dates Are Missing.';
               +' CASE may NOT'
        @ 21,20 SAY 'Be Closed Until Update Is ';
               +'Accomplished'
        @ 23,20 SAY ' Press Any Key To Continue'
        WAIT
        ERASE
        @ 10,25 SAY '***** Please Standby *****'

        STORE '1G' TO M:TYPE
        DO C:XDBHNDLR
        STORE F TO CL:FILLED
    ENDIF

*****  IF THE CASE IS COMPLETE AND READY TO BE CLOSED

    IF CL:FILLED

        STORE T TO CL:VLCT
        DO WHILE CL:VLCT

            @ 16,26 SAY 'VENDOR LIABILITY CODE  ';
                    GET CL:VLC PICTURE 'A'
            READ
            IF CL:VLC = ' '
```

```
                  @ 23,30 SAY 'VENDOR CODE MAY NOT ';
                        +'BE BLANK'
               ELSE
                  STORE F TO CL:VLCT
               ENDIF
            ENDDO <CL:VLCT>
            @ 23,30 SAY '                                  ';
                  +'    '
            RELEASE CL:VLCT

            STORE T TO CL:CRT
            DO WHILE CL:CRT
               @ 17,26 SAY 'CREDIT CODE              ' ;
                       GET CL:CR
               READ
               IF CL:CR = ' '
                  @ 23,30 SAY ' CREDIT CODE MAY NOT ';
                        +'BE BLANK'
               ELSE
                  STORE F TO CL:CRT
               ENDIF
             DDO <CL:CRT>
             23,30 SAY '                                  ';
                  +'    '
            RELEASE CL:CRT

            STORE ' ' TO CL:REPLY

            @ 20,22 SAY '1 - CLOSE CASE  2 - CHANGE  ';
                  +'3 - EXIT'
            @ 22,40 GET CL:REPLY
            READ
            IF CL:REPLY = '3'
               RELEASE ALL EXCEPT C:*
               RETURN
            ENDIF
            IF CL:REPLY = '1'
               ERASE
                @ 12,30 SAY 'CASE NUMBER'
                @ 12,44 SAY M:CASE
                @ 14,31 SAY 'IS BEING CLOSED'
                @ 16,30 SAY '  PLEASE STANDBY'

***** TRANSLATE LC:CLDATE FROM MMDDYY TO JULIAN FORM

                STORE VAL($(LC:CLDATE,1,2)) TO V:MM
                STORE VAL($(LC:CLDATE,3,2)) TO V:DD
                STORE VAL($(LC:CLDATE,5,2)) TO V:YY
                DO C:OJULIAN
                STORE V:JULDATE TO M:CLOSE
                RELEASE ALL LIKE V:*
                STORE M:CASE TO M:KEY

***** PUT CLOSING DATE INTO PROPER FORMAT FOR STORAGE

                STORE $(M:DATES,41,5) TO M:REOPEN
                STORE $(M:DATES,1,35) + M:CLOSE +;
                      M:REOPEN TO CL:DATES
                STORE CL:DATES TO M:DATES
                STORE CL:VLC TO M:VLC
                STORE CL:CR TO M:CR
                STORE '1C' TO M:TYPE
                STORE M:REC1 TO T:REC1

                DO C:XDBHNDLR

***** CREATE RECORD IN CLOSE1

                STORE '3F' TO M:TYPE
```

```
              DO C:XDBHNDLR
              STORE M:CASE TO T:CASE
              RELEASE ALL LIKE M:*
              STORE T:CASE TO M:CASE
              USE D:OPEN1 INDEX D:OCASE1,D:ONSN
              GOTO T:REC1
              DELETE
              STORE '2B' TO M:TYPE

              STORE T:CASE TO M:KEY
              DO C:XDBHNDLR

              STORE # TO T:REC2
              STORE '4F' TO M:TYPE

              DO C:XDBHNDLR

              STORE M:CASE TO T:CASE
              RELEASE ALL LIKE M:*
              STORE T:CASE TO M:CASE
              USE D:OPEN2 INDEX D:OCASE2
              GOTO T:REC2
              DELETE

             STORE F TO CL:ENTER
             ERASE
          ENDIF
          @ 20,22 SAY '                          ';
                 +'         '
          @ 22,22 SAY '                          ';
                 +'         '
          ERASE
      ENDIF <CL:FILLED>
   ENDDO <CL:MORE>
   RELEASE ALL LIKE CL:*
   RELEASE ALL LIKE M:*
   RELEASE ALL LIKE T:*
   STORE T TO CL:CLOSE
ENDDO <CL:CLOSE>

***** END OF PROGRAM
```

VII. DATA BASE HANDLER MODULE

```
***************************************************************
**                                                           **
**   DATE: 29 NOV 1983                                       **
**   VERSION: 1.0                                            **
**   MODULE NAME: XDBHNDLR                                   **
**   MODULE PURPOSE: TO PROVIDE ACCESS TO THE DATA BASE      **
**                   RECORDS FOR READ AND UPDATE             **
**                                                           **
**   MODULE INTERFACE DEFINITION                             **
**                                                           **
**      INPUTS: M:CASE, M:COG, M:NSN, M:CAT, M:NOMEN,        **
**              M:UIC, M:UI, M:QTYDEF, M:UPRC, M:EPRC,       **
**              M:ORG, M:DOC, M:DOCNO, M:DATES, M:REPCON,    **
**              M:FSCM, M:TIME, M:WHO, M:NUM, M:CR, M:SCR,   **
**              M:SM, M:09Q, M:DEF, M:VLC, M:ACTPT,          **
**              M:SCRQTY, M:REC1, M:QTYINS, M:QTYREC,        **
**              M:QTYSTK, M:DEFV, M:DEFR, M:ITEM, M:OVER,    **
**              M:OTF, M:GOV, M:DITEM, M:CCOST, M:WNTY,      **
**              M:WUC, M:DIS, M:DETAILS, M:REPLY,            **
**              M:ACTTKN, M:COSTC, M:STATUSC, M:CAUSEC,      **
**              M:RETC, M:ACTDISP, M:MFG, M:LOT, M:TYPE      **
**                                                           **
**      OUTPUTS: M:CASE, M:COG, M:NSN, M:CAT, M:NOMEN,       **
**               M:UIC, M:UI, M:QTYDEF, M:UPRC, M:EPRC,      **
**               M:ORG, M:DOC, M:DOCNO, M:DATES,             **
**               M:REPCON, M:FSCM, M:TIME, M:WHO, M:NUM,     **
**               M:CR, M:SCR, M:SM, M:09Q, M:DEF, M:VLC,     **
**               M:ACTPT, M:SCRQTY, M:REC1, M:QTYINS,        **
**               M:QTYREC, M:QTYSTK, M:DEFV, M:DEFR,         **
**               M:ITEM, M:OVER, M:OTF, M:GOV, M:DITEM,      **
**               M:CCOST, M:WNTY, M:WUC, M:DIS, M:DETAILS,   **
**               M:REPLY, M:ACTTKN, M:COSTC, M:STATUSC,      **
**               M:CAUSEC, M:RETC, M:ACTDISP, M:MFG,         **
**               M:LOT, M:TYPE                               **
**                                                           **
**                                                           **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:                **
**        ACCEPTS THE TRANSACTION TYPE CODE AND ACCESSES     **
**        THE DATA BASE (I.E. OPEN1, OPEN2, CLOSE1,          **
**        OR CLOSE2) WITH THE DESIRED OPERATION (I.E.        **
**        READ, READ/LOCK, WRITE/UNLOCK, UNLOCK).  THE       **
**        OPERATION PERFORMED DEPENDS ON THE TYPE CODE       **
**        RECEIVED.  THE MODULE WILL RETURN A TYPE CODE      **
**        TO INDICATE THE SUCCESS OR FAILURE OF THE          **
**        OPERATION.                                         **
**                                                           **
**   SUPERORDINATE MODULES: XOPEN2, XUPDAT, CLOSREC          **
**   SUBORDINATE MODULES: NONE                               **
**   AUTHOR: R. G. NICHOLS                                   **
**                                                           **
***************************************************************

*****  THE GENERAL OPERATION OF THE DATA BASE HANDLER
*****  IS BASED ON A CASE CONSTRUCT

*****  M:TYPE IS THE SELECTION KEY THAT DETERMINES THE
*****  TRANSACTION TO PERFORM - THE FIRST DIGIT REPRESENTS
*****  THE FILE THAT IS TO BE USED AND THE SECOND DIGIT
*****  REPRESENTS THE TYPE OF ACTIVITY (I.E. READ ACCESS
*****  WITH NSN KEY, READ ACCESS WITH CASE KEY, READ/LOCK
*****  WRITE NEW RECORD, WRITE UPDATE UNLCOK, RECORD UNLOCK
*****  ETC.)

DO CASE

*****  USE OPEN1 DATA BASE FILE

   CASE $(M:TYPE,1,1) = '1'
      IF $(M:TYPE,2,1) = 'A' .OR. $(M:TYPE,2,1) = 'B'

*****  IF 'A' THEN ACCESS BY NSN

         IF $(M:TYPE,2,1) = 'A'
            STORE 'USE D:OPEN1 INDEX D:ONSN' TO H:USEFILE
         ELSE

*****  IF 'B' THEN ACCESS BY CASE

            STORE 'USE D:OPEN1 INDEX D:OCASE1' TO H:USEFILE
         ENDIF

*****  USE INDIRECT FILE IDENTIFICATION TO SELECT USE FILE

         &H:USEFILE
         FIND &M:KEY

*****  SEARCH FOR DESIRED RECORD.  IF FOUND RETURN DATA
*****  ELEMENTS AND SET M:TYPE TO 0 OTHERWISE SET M:TYPE
*****  TO 9

         IF # = 0
           STORE '9' TO M:TYPE
           RELEASE ALL LIKE H:*
           RETURN
         ELSE
           STORE # TO M:REC1
           STORE CASE TO M:CASE
           STORE COG TO M:COG
           STORE NSN TO M:NSN
           STORE CAT TO M:CAT
           STORE NOMEN TO M:NOMEN
           STORE UIC TO M:UIC
           STORE UI TO M:UI
           STORE QTYDEF TO M:QTYDEF
           STORE UPRC TO M:UPRC
           STORE EPRC TO M:EPRC
           STORE ORG TO M:ORG
           STORE DOC TO M:DOC
           STORE DOCNO TO M:DOCNO
           STORE DATES TO M:DATES
           STORE REPCON TO M:REPCON
           STORE FSCM TO M:FSCM
           STORE TIME TO M:TIME
           STORE WHO TO M:WHO
           STORE NUM TO M:NUM
           STORE CR TO M:CR
           STORE SCR TO M:SCR
           STORE SM TO M:SM
           STORE O9Q TO M:O9Q
           STORE DEF TO M:DEF
           STORE VIC TO M:VIC
           STORE ACTPT TO M:ACTPT
           STORE SCRQTY TO M:SCRQTY
           STORE '0' TO M:TYPE
           RELEASE ALL LIKE H:*
           RETURN
        ENDIF
      ELSE

        IF $(M:TYPE,2,1) = 'H' .OR. $(M:TYPE,2,1) = 'I'
```

```
*****  READ RECORD SPECIFIED BY M:REC1 (RECORD NUMBER)
*****  IF RECORD NOT FOUND RETURN M:TYPE = 9 OTHERWISE
*****  RETURN THE RECORD ELEMENTS

            USE D:OPEN1 INDEX D:ONSN
            GOTO M:REC1
            IF # <> M:REC1
              STORE '9' TO M:TYPE
              RELEASE ALL LIKE H:*
              RETURN
            ELSE

*****  IF M:TYPE = I THEN SKIP TO NEXT RECORD AND READ

              IF $(M:TYPE,2,1) = 'I'
                 SKIP
              ENDIF
              STORE # TO M:REC1
              STORE CASE TO M:CASE
              STORE COG TO M:COG
              STORE NSN TO M:NSN
              STORE CAT TO M:CAT
              STORE NOMEN TO M:NOMEN
              STORE UIC TO M:UIC
              STORE UI TO M:UI
              STORE QTYDEF TO M:QTYDEF
              STORE UPRC TO M:UPRC
              STORE EPRC TO M:EPRC
              STORE ORG TO M:ORG
              STORE DOC TO M:DOC
              STORE DOCNO TO M:DOCNO
              STORE DATES TO M:DATES
              STORE REPCON TO M:REPCON
              STORE FSCM TO M:FSCM
              STORE TIME TO M:TIME
              STORE WHO TO M:WHO
              STORE NUM TO M:NUM
              STORE CR TO M:CR
              STORE SCR TO M:SCR
              STORE SM TO M:SM
              STORE O9Q TO M:O9Q
              STORE DEF TO M:DEF
              STORE VIC TO M:VLC
              STORE ACTPT TO M:ACTPT
              STORE SCRQTY TO M:SCRQTY
              STORE '0' TO M:TYPE
              RELEASE ALL LIKE H:*
              RETURN
           ENDIF
        ELSE

*****  THE FOLLOWING SECTION OF CODE UTILIZES A DELAY LOOP
*****  AND A LOCKING MECHANISM TO ENSURE THAT ONLY ONE USER
*****  IS WRITING TO A FILE AT ANY GIVEN TIME

           STORE T TO H:FAIL
           DO WHILE H:FAIL
              STORE 0 TO H:LOOPCNTR
              STORE 2 TO H:CNTR
              USE D:FILESTAT

*****  WHILE OPEN1 IS BEING USED, ENTER DELAY LOOP

              DO WHILE OPEN1<>'      '
                 STORE H:CNTR-1 TO H:CNTR
                 IF H:CNTR=0
                    STORE 2 TO H:CNTR
                    STORE H:LOOPCNTR+1 TO H:LOOPCNTR
                 ENDIF

*****  IF IN DELAY LOOP A SHORT PERIOD OF TIME DISPLAY THE
*****  FACT THAT THE FILE IS CURRENTLY IN USE

                 IF H:LOOPCNTR=2
                 @ 23,16 SAY 'OPEN CASE FILE CURRENTLY IN USE';
                             +' - PLEASE STANDBY'
                 ENDIF

*****  CLOSE OUT THE USE FILE THEN REOPEN IT TO CHECK LATEST
*****  STATUS - THE FILE MUST FIRST BE CLOSED AND THEN
*****  REOPENED TO CHECK LATEST STATUS

                 USE
                 USE D:FILESTAT

*****  DELAY BEFORE TRYING AGAIN

                 STORE 1 TO H:DELAY
                 DO WHILE H:DELAY < 5
                   STORE H:DELAY + 1 TO H:DELAY
                 ENDDO
              ENDDO

*****  IF FILE NOT IN USE, WRITE OUT YOUR LOCK INFORMATION

              @ 23,16 SAY '                                       ';
                          + '                     '
              @ 23,16 SAY '               FILE LOCKED             ';
                          + '                     '
              REPL OPEN1 WITH C:WHO
              USE

*****  IF TYPE C TRANSACTION - PERFORM A WRITE/UNLOCK

              IF $(M:TYPE,2,1) = 'C'
                 USE D:FILESTAT

*****  VERIFY THAT YOU HAVE WRITE ACCESS TO THE DATA BASE
*****  RESET THE LOCK ON THE RECORD AND WRITE OUT THE
*****  UPDATED INFORMATION

                 IF OPEN1 = C:WHO
                    STORE '            ' TO M:TIME
                    USE D:OPEN1 INDEX D:ONSN, D:OCASE1
                    GOTO M:REC1
REPL CASE WITH !(M:CASE),COG WITH !(M:COG),NSN WITH;
 !(M:NSN),CAT WITH !(M:CAT),NOMEN WITH !(M:NOMEN),UIC ;
WITH !(M:UIC),UI WITH !(M:UI),QTYDEF WITH M:QTYDEF,UPRC ;
WITH M:UPRC,EPRC WITH M:EPRC,ORG WITH !(M:ORG),DOC WITH ;
!(M:DOC)
REPL DOCNO WITH !(M:DOCNO),DATES WITH !(M:DATES),REPCON ;
WITH !(M:REPCON),FSCM WITH !(M:FSCM),TIME WITH !(M:TIME),;
WHO WITH !(M:WHO),NUM WITH !(M:NUM),CR WITH !(M:CR),SCR ;
WITH !(M:SCR),SM WITH !(M:SM),09Q WITH !(M:09Q)
REPL DEF WITH M:DEF,VLC WITH !(M:VLC),ACTPT WITH;
 !(M:ACTPT),SCRQTY WITH M:SCRQTY
                    STORE '0' TO M:TYPE
                    USE

*****  UNLOCK THE DATA FILE FOR OTHERS TO WRITE

                    USE D:FILESTAT
                    REPL OPEN1 WITH '     '
                    USE
                    RELEASE ALL LIKE H:*
                    RETURN
                 ENDIF
              ELSE
*****  IF TYPE D THEN PERFORM READ/LOCK WITH NSN ACCESS KEY

                 IF $(M:TYPE,2,1)='D' .OR. $(M:TYPE,2,1)='E'
                    IF $(M:TYPE,2,1) = 'D'
                       STORE 'USE D:OPEN1 INDEX D:ONSN, ';
                             + 'D:OCASE1' TO H:USEFILE

*****  IF TYPE C THEN PERFORM READ/LOCK WITH CASE ACCESS KEY

                    ELSE
                       STORE 'USE D:OPEN1 INDEX D:OCASE1,';
                             +' D:ONSN' TO H:USEFILE
                    ENDIF
                    USE D:FILESTAT

*****  CHECK TO SEE IF THE USER HAS THE FILE LOCKED FOR
*****  WRITING

                    IF OPEN1 = C:WHO
                       &H:USEFILE
                       FIND &M:KEY

*****  CHECK TO SEE IF DESIRED RECORD EXISTS.  IF SO LOCK
*****  THE RECORD BY FILLING THE TIME STAMP AND RETURN THE
*****  RECORDS CONTENTS

                       IF # = 0
                          STORE '9' TO M:TYPE
                          USE D:FILESTAT
                          REPLACE OPEN1 WITH '    '
                          USE
                          RELEASE ALL LIKE H:*
                          RETURN
                       ELSE

*****  CHECK TO SEE IF THE RECORD HAS PREVIOUSLY BEEN
*****  LOCKED FOR UPDATE - RETURN TYPE = 1 IF PREVIOUSLY
*****  LOCKED OTHERWISE LOCK THE RECORD BY FILLING IN THE
*****  TIMESTAMP AND READ THE RECORD

                          IF  TIME <> '       '
                             STORE '1' TO M:TYPE
                             RELEASE ALL LIKE H:*
                             USE D:FILESTAT
                             REPLACE OPEN1 WITH '    '
                             USE
                             RETURN
                          ELSE

*****  READ DATE/TIME FOR TIMESTAMP

                             STORE   TO H:DUMMY
                             POKE 61440, 180, 44, 205, 33,;
                               137, 22, 13, 240, 137, 14, ;
                               15, 240, 195
                             SET CALL TO 61440
                             CALL H:DUMMY
                             STORE STR(PEEK(61456),2) TO ;
                                   H:HOUR
                             STORE STR(PEEK(61455),2) TO ;
                                   H:MIN
                             STORE STR(PEEK(61454),2) TO ;
                                   H:SEC
                             IF $(H:HOUR,1,1) =
                                STORE 0 +$(H:HOUR,2,1) ;
                                   TO H:HOUR
                             ENDIF
                             IF $(H:MIN,1,1)=
                                STORE 0+$(H:MIN,2,1) TO :
                                   H:MIN
                             ENDIF
                             IF $(H:SEC,1,1)=
                                STORE 0+$(H:SEC,2,1) TO :
                                   H:SEC
                             ENDIF
                             STORE C:JULIAN+H:HOUR +H:MIN+;
                                   H:SEC TO M:TIME
                             REPL TIME WITH M:TIME
                             STORE # TO M:REC1
                             STORE CASE TO M:CASE
                             STORE COG TO M:COG
                             STORE NSN TO M:NSN
                             STORE CAT TO M:CAT
                             STORE NOMEN TO M:NOMEN
                             STORE UIC TO M:UIC
                             STORE UI TO M:UI
                             STORE QTYDEF TO M:QTYDEF
                             STORE UPRC TO M:UPRC
                             STORE EPRC TO M:EPRC
                             STORE ORG TO M:ORG
                             STORE DOC TO M:DOC
                             STORE DOCNO TO M:DOCNO
                             STORE DATES TO M:DATES
                             STORE REPCON TO M:REPCON
                             STORE FSCM TO M:FSCM
                             STORE TIME TO M:TIME
                             STORE WHO TO M:WHO
                             STORE NUM TO M:NUM
                             STORE CR TO M:CR
                             STORE SCR TO M:SCR
                             STORE SM TO M:SM
                             STORE 09Q TO M:09Q
                             STORE DEF TO M:DEF
                             STORE VLC TO M:VLC
                             STORE ACTPT TO M:ACTPT
                             STORE SCRQTY TO M:SCRQTY
                             STORE '0' TO M:TYPE
                             USE D:FILESTAT
                             REPL OPEN1 WITH '    '
                             USE
                             RELEASE ALL LIKE H:*
                             RETURN
                          ENDIF
                       ENDIF
                    ENDIF
                 ELSE

***** TYPE F WILL BE USED TO CREATE NEW RECORDS

                    IF $(M:TYPE,2,1) = 'F'
                       USE D:FILESTAT

*****  CHECK TO SEE IF THE USER HAS THE FILE LOCKED FOR
*****  WRITING

                       IF OPEN1 = C:WHO
*                         @ 23,25 SAY '    UPDATING CASE ';
                                  + 'FILE       '
                          USE D:OPEN1 INDEX D:OCASE1,;
                              D:ONSN

*****  IF NC CASE NUMBER HAS BEEN ASSIGNED BECAUSE OF A
*****  PREVIOUS CASE, ASSIGN A NEW CASE NUMBER

                          IF M:CASE = '       '
```

```
*****  CHECK FOR LAST CASE IN THE DATA BASE AND ASSIGN
*****  NEXT AVAILABLE NUMBER
                                   GOTO BOTTOM
                                   STORE $(CASE,1,1) TO H:YR
                                   STORE VAL($(CASE,2,5))+1 TO :
                                         H:SERIAL
                                   IF H:SERIAL > 9999
                                      STORE H:YR + ;
                                      STR(H:SERIAL,5,0) TO M:CASE
                                   ELSE
                                      IF H:SERIAL > 999
                                         STORE H:YR + '0' + ;
                                         STR(H:SERIAL,4,0) TO ;
                                         M:CASE
                                      ELSE
                                         IF H:SERIAL > 99
                                            STORE H:YR + '00' +;
                                            STR(H:SERIAL,3,0) TO;
                                                M:CASE
                                         ELSE
                                            IF H:SERIAL > 9
                                               STORE H:YR+'000'+;
                                               STR(H:SERIAL,2,0);
                                                   TO M:CASE
                                            ELSE
                                               STORE H:YR+'0000';
                                              +STR(H:SERIAL,1,0);
                                                   TO M:CASE
                                            ENDIF
                                         ENDIF
                                      ENDIF
                                   ENDIF
                                ENDIF
                                @ 23,26 SAY 'CREATING NEW RECCRD';
                                           +' - OPEN1'

*****  CREATE NEW RECCRD AND FILL WITH DATA

                                APPEND BLANK
REPL CASE WITH !(M:CASE),COG WITH !(M:COG),NSN WITH ;
!(M:NSN),CAT WITH !(M:CAT),NOMEN WITH !(M:NOMEN),UIC WITH;
 !(M:UIC),UI WITH !(M:UI),QTYDEF WITH M:QTYDEF,UPRC WITH ;
M:UPRC,EPRC WITH M:EPRC,ORG WITH !(M:ORG),DOC WITH !(M:DOC)
REPL DOCNO WITH !(M:DCCNO),DATES WITH !(M:DATES),REPCON ;
WITH !(M:REPCON),FSCM WITH !(M:FSCM),TIME WITH !(M:TIME),;
WHO WITH !(C:WHO),NUM WITH !(M:NUM),SM WITH !(M:SM),O9Q ;
WITH !(M:O9Q),DEF WITH M:DEF,ACTPT WITH !(M:ACTPT)
@ 23,26 SAY '                                        '
@ 23,25 SAY '                                          '
                                STORE '0' TO M:TYPE
                                USE D:FILESTAT
                                REPL OPEN1 WITH '    '
                                USE
                                RELEASE ALL LIKE H:*
                                RETURN
                             ENDIF
                          ELSE

*****  IF TYPE G THEN UNLOCK A PREVIOUSLY LOCKED RECORD
*****  (NO UPDATE WILL TAKE PLACE)

                             IF $(M:TYPE,2,1) = 'G'
                                USE D:FILESTAT

*****  CHECK TO SEE IF THE USER HAS THE FILE LOCKED FOR
*****  WRITING

                                IF OPEN1 = C:WHO
                             USE D:OPEN1
                             GOTO M:REC1

*****  CLEAR THE TIMESTAMP TO UNLOCK

                             IF TIME = M:TIME
                                REPL TIME WITH '              '
                             ENDIF
                             USE D:FILESTAT
                             REPL OPEN1 WITH '     '
                             USE
                          ENDIF
                          RELEASE ALL LIKE H:*
                          RETURN
                       ENDIF
                    ENDIF
                 ENDIF
              ENDIF
           ENDDO
        ENDIF
      ENDIF

*****  USE OPEN2 DATA BASE FILE

   CASE $(M:TYPE,1,1) = '2'

*****  SINCE OPEN2 HAS A SINGLE KEY, BOTH TYPE A AND B
*****  MAY BE USED FOR ACCESS

      IF $(M:TYPE,2,1) = 'A' .OR. $(M:TYPE,2,1) = 'B'
         USE D:OPEN2 INDEX D:OCASE2
         FIND &M:KEY

*****  FIND REQUESTED RECORD IF FOUND RETURN THE DATA
*****  ELEMENTS AND TYPE = 0, OTHERWISE RETURN TYPE = 9

         IF # = 0
           STORE '9' TO M:TYPE
           RELEASE ALL LIKE H:*
           RETURN
         ELSE
           STORE # TO M:REC1
           STORE CASE TO M:CASE
           STORE QTYINS TO M:QTYINS
           STORE QTYREC TO M:QTYREC
           STORE QTYSTK TO M:QTYSTK
           STORE DEFV TO M:DEFV
           STORE DEFR TO M:DEFR
           STORE ITEM TO M:ITEM
           STORE OVER TO M:OVER
           STORE OTF TO M:OTF
           STORE GOV TO M:GOV
           STORE TIME TO M:TIME
           STORE WHO TO M:WHO
           STORE DITEM TO M:DITEM
           STORE CCOST TO M:CCOST
           STORE WNTY TO M:WNTY
           STORE WUC TO M:WUC
           STORE DIS TO M:DIS
           STORE DETAILS TO M:DETAILS
           STORE REPLY TO M:REPLY
           STORE ACTTKN TO M:ACTTKN
           STORE COSTC TO M:COSTC
           STORE STATUSC TO M:STATUSC
           STORE CAUSEC TO M:CAUSEC
           STORE RETC TO M:RETC
           STORE ACTDISP TO M:ACTDISP
```

```
            STORE MFG TO M:MFG
            STORE LOT TO M:LOT
            STORE '0' TO M:TYPE
            RELEASE ALL LIKE H:*
            RETURN
          ENDIF
        ELSE

*****   IF TYPE H OR I ACCESS BY RECORD NUMBER (M:REC1)

          IF $(M:TYPE,2,1) = 'H' .OR. $(M:TYPE,2,1) = 'I'
             USE D:OPEN2
             GOTO M:REC1
             IF # <> M:REC1
               STORE 'S' TO M:TYPE
               RELEASE ALL LIKE H:*
               RETURN
             ELSE

*****   IF TYPE I, SKIP TO NEXT RECORD AND READ DATA

               IF $(M:TYPE,2,1) = 'I'
                  SKIP
               ENDIF
               STORE # TO M:REC1
               STORE CASE TO M:CASE
               STORE QTYINS TO M:QTYINS
               STORE QTYREC TO M:QTYREC
               STORE QTYSTK TO M:QTYSTK
               STORE DEFV TO M:DEFV
               STORE DEFR TO M:DEFR
               STORE ITEM TO M:ITEM
               STORE OVER TO M:OVER
               STORE OTF TO M:OTF
               STORE GOV TO M:GOV
               STORE TIME TO M:TIME
               STORE WHO TO M:WHO
               STORE DITEM TO M:DITEM
               STORE CCOST TO M:CCOST
               STORE WNTY TO M:WNTY
               STORE WUC TO M:WUC
               STORE DIS TO M:DIS
               STORE DETAILS TO M:DETAILS
               STORE REPLY TO M:REPLY
               STORE ACTTKN TO M:ACTTKN
               STORE COSTC TO M:COSTC
               STORE STATUSC TO M:STATUSC
               STORE CAUSEC TO M:CAUSEC
               STORE RETC TO M:RETC
               STORE ACTDISP TO M:ACTDISP
               STORE MFG TO M:MFG
               STORE LOT TO M:LOT
               STORE '0' TO M:TYPE
               RELEASE ALL LIKE H:*
               RETURN
             ENDIF
          ELSE

*****   THE FOLLOWING SECTION REQUIRES THAT THE DATA BASE
*****   BE LOCKED TO ENSURE ONLY A SINGLE UPDATE IS
*****   PERFORMED AT A TIME

             STORE T TO H:FAIL
             DO WHILE H:FAIL
               STORE 0 TO H:LOOPCNTR
               STORE 2 TO H:CNTR
               USE D:FILESTAT

*****   LOOP WHILE OPEN2 IS LOCKED BY ANOTHER USER
```

```
                DO WHILE OPEN2<>'      '
                   STORE H:CNTR-1 TO H:CNTR
                   IF H:CNTR=0
                      STORE 2 TO H:CNTR
                      STORE H:LOOPCNTR+1 TO H:LOOPCNTR
                   ENDIF
                   IF H:LOOPCNTR=2
                   @ 23,16 SAY 'OPEN CASE FILE CURRENTLY IN';
                             + ' USE - PLEASE STANDBY'
                   ENDIF

*****   CLOSE AND REOPEN THE FILE STATS TO DETERMINE ANY
*****   CHANGE IN FILE LOCKING STATUS

                   USE
                   USE D:FILESTAT

*****   DELAY BEFORE NEXT ATTEMPT TO ACCESS THE DATA BASE

                   STORE 1 TO H:DELAY
                   DO WHILE H:DELAY < 5
                     STORE H:DELAY + 1 TO H:DELAY
                   ENDDO
                ENDDO
                @ 23,16 SAY '                                      ';
                      + '                 '
*               @ 23,16 SAY '               FILE LOCKED           ';
                      + '                 '

*****   WRITE LOCK TO FILESTAT

                REPL OPEN2 WITH C:WHO
                USE

*****   IF TYPE C PERFORM WRITE/UNLOCK

                IF $(M:TYPE,2,1) = 'C'
                   USE D:FILESTAT

*****   CHECK TO SEE IF USER HAS WRITE ACCESS TO THE DATA
*****   BASE

                   IF OPEN2 = C:WHO
                      STORE '          ' TO M:TIME
                      USE D:OPEN2 INDEX D:OCASE2

*****   WRITE UPDATE INFORMATION TO THE FILE

                      GCTO M:REC1
REPL CASE WITH !(M:CASE),QTYINS WITH M:QTYINS,QTYREC WITH ;
M:QTYREC,QTYSTK WITH M:QTYSTK,DEFV WITH !(M:DEFV),DEFR ;
WITH !(M:DEFR),ITEM WITH !(M:ITEM),OVER WITH !(M:OVER),;
OTF WITH !(OTF),GOV WITH !(M:GOV),TIME WITH !(M:TIME)
REPL WHO WITH !(M:WHC),DITEM WITH !(M:DITEM),CCOST WITH ;
M:CCCST,WNTY WITH !(M:WNTY),WUC WITH !(M:WUC),DIS WITH ;
!(M:DIS),DETAILS WITH !(M:DETAILS),REPLY WITH !(M:REPLY),;
ACTTKN WITH !(M:ACTTKN),COSTC WITH !(M:COSTC)
REPL STATUSC WITH !(M:STATUSC),CAUSEC WITH !(M:CAUSEC),;
RETC WITH !(M:RETC),ACTDISP WITH !(M:ACTDISP),MFG WITH ;
!(M:MFG),LOT WITH !(M:LOT)
                      STORE '0' TO M:TYPE
                      USE

***** UNLOCK FILE FOR OTHERS USE

                      USE D:FILESTAT
                      REPL OPEN2 WITH '      '
                      USE
```

```
                    RELEASE ALL LIKE H:*
                    RETURN
                 ENDIF
              ELSE

*****  IF TYPE D OR E PERFORM READ/LOCK

                 IF $(M:TYPE,2,1) = 'D' .OR. $(M:TYPE,2,1) = 'E'
                    USE D:FILESTAT

*****  CHECK TO SEE IF USER HAS WRITE ACCESS TO THE DATA
*****  BASE

                    IF OPEN2 = C:WHO
                       USE D:OPEN2 INDEX D:OCASE2
                       FIND &M:KEY

*****  IF DESIRED RECORD FOUND VERIFY THAT RECORD IS NOT
*****  CURRENTLY IN USE - IF NOT FOUND RETURN TYPE = 9

                       IF # = 0
                          STORE '9' TO M:TYPE
                          USE D:FILESTAT
                          REPLACE OPEN2 WITH '      '
                          USE
                          RELEASE ALL LIKE H:*
                          RETURN
                       ELSE

*****  IF TIMESTAMP FILLED, RECORD IN USE - RETURN
*****  TYPE = 1

                          IF  TIME <> '           '
                             STORE '1' TO M:TYPE
                             RELEASE ALL LIKE H:*
                             USE D:FILESTAT
                             REPLACE OPEN2 WITH '      '
                             USE
                             RETURN
                          ELSE

*****  LOAD TIME/DATE INTO TIMESTAMP AND READ THE RECORD

                             STORE   TO H:DUMMY
                             POKE 61440, 180, 44, 205, 33,;
                                137, 22, 13, 240, 137, 14,;
                                15, 240, 195
                             SET CALL TO 61440
                             CALL H:DUMMY
                             STORE STR(PEEK(61456),2) TO ;
                                   H:HOUR
                             STORE STR(PEEK(61455),2) TO ;
                                   H:MIN
                             STORE STR(PEEK(61454),2) TO ;
                                   H:SEC
                             IF $(H:HOUR,1,1) =
                                STORE 0 +$(H:HOUR,2,1) ;
                                   TO H:HOUR
                             ENDIF
                             IF $(H:MIN,1,1)=
                                STORE 0+$(H:MIN,2,1) TO ;
                                   H:MIN
                             ENDIF
                             IF $(H:SEC,1,1)=
                                STORE 0+$(H:SEC,2,1) TO ;
                                   H:SEC
                             ENDIF
                             STORE C:JULIAN+H:HOUR +H:MIN+;
                                   H:SEC TO M:TIME
                             REPL TIME WITH M:TIME
                             STORE # TO M:REC1
                             STORE CASE TO M:CASE
                             STORE QTYINS TO M:QTYINS
                             STORE QTYREC TO M:QTYREC
                             STORE QTYSTK TO M:QTYSTK
                             STORE DEFV TO M:DEFV
                             STORE DEFR TO M:DEFR
                             STORE ITEM TO M:ITEM
                             STORE OVER TO M:OVER
                             STORE OTF TO M:OTF
                             STORE GOV TO M:GOV
                             STORE TIME TO M:TIME
                             STORE WHO TO M:WHO
                             STORE DITEM TO M:DITEM
                             STORE CCOST TO M:CCOST
                             STORE WNTY TO M:WNTY
                             STORE WUC TO M:WUC
                             STORE DIS TO M:DIS
                             STORE DETAILS TO M:DETAILS
                             STORE REPLY TO M:REPLY
                             STORE ACTTKN TO M:ACTTKN
                             STORE COSTC TO M:COSTC
                             STORE STATUSC TO M:STATUSC
                             STORE CAUSEC TO M:CAUSEC
                             STORE RETC TO M:RETC
                             STORE ACTDISP TO M:ACTDISP
                             STORE MFG TO M:MFG
                             STORE LOT TO M:LOT
                             STORE '0' TO M:TYPE

*****  UNLOCK DATA BASE FOR OTHER USERS

                             USE D:FILESTAT
                             REPL OPEN2 WITH '     '
                             USE
                             RELEASE ALL LIKE H:*
                             RETURN
                          ENDIF
                       ENDIF
                    ENDIF
                 ELSE

*****  TYPE F CREATES NEW RECORDS

                    IF $(M:TYPE,2,1) = 'F'
                       USE D:FILESTAT

*****  CHECK TO SEE IF USER HAS WRITE ACCESS TO THE DATA
*****  BASE

                       IF OPEN2 = C:WHO
*                         @ 23,25 SAY '     UPDATING CASE';
                                + ' FILE          '
                          USE D:OPEN2 INDEX D:OCASE2

*****  ADD THE NEW RECORD AND ENTER DATA

                          APPEND BLANK
REPL CASE WITH !(M:CASE),QTYINS WITH M:QTYINS,QTYREC WITH:
 M:QTYREC,QTYSTK WITH M:QTYSTK,DEFV WITH !(M:DEFV),DEFR ;
WITH !(M:DEFR),ITEM WITH !(M:ITEM),OVER WITH !(M:OVER),;
OTF WITH !(OTF),GOV WITH !(M:GOV),TIME WITH !(M:TIME)
REPL WHO WITH !(C:WHC),DITEM WITH !(M:DITEM),WNTY WITH :
!(M:WNTY),WUC WITH !(M:WUC),DIS WITH !(M:DIS),DETAILS ;
WITH !(M:DETAILS),ACTDISP WITH !(M:ACTDISP),MFG WITH ;
!(M:MFG),LOT WITH !(M:LOT)
                          STORE '0' TO M:TYPE
```

```
***** UNLOCK DATA BASE FOR OTHERS

                          USE D:FILESTAT
                          REPL OPEN2 WITH '   '
                          USE
                          @ 23,25 SAY '                    ';
                                      + '             '
                          RELEASE ALL LIKE H:*
                          RETURN
                       ENDIF
                    ELSE

*****  IF TYPE G PERFORM UNLOCK (NO UPDATE)

                       IF $(M:TYPE,2,1) = 'G'
                          USE D:FILESTAT
                          IF OPEN2 = C:WHO
                             USE D:OPEN2
                             GOTO M:REC1
                             IF TIME = M:TIME
                                REPL TIME WITH '        '
                             ENDIF

*****  UNLOCK DATA BASE FOR OTHERS

                             USE D:FILESTAT
                             REPL OPEN2 WITH '    '
                             USE
                          ENDIF
                          RELEASE ALL LIKE H:*
                          RETURN
                       ENDIF
                    ENDIF
                 ENDIF
              ENDIF
           ENDDO
        ENDIF
      ENDIF

*****  TYPES 3 AND 4 DEAL WITH CLOSE1 AND CLOSE2
*****  THE METHODOLOGY USED FOR THESE TYPES IS THE SAME
*****  AS FOR THE OPEN1 AND OPEN2 DATA BASE FILES
*****  ONLY DIFFERENCES WILL BE NOTED BELOW SINCE THE
*****  BASIC COMMENTS ARE THE SAME AS ABOVE


***** TYPE 3 USES CLOSE1

   CASE $(M:TYPE,1,1) = '3'
      IF $(M:TYPE,2,1) = 'A' .OR. $(M:TYPE,2,1) = 'B'
         IF $(M:TYPE,2,1) = 'A'
            STORE 'USE D:CLOSE1 INDEX D:CNSN' TO H:USEFILE
         ELSE
            STORE 'USE D:CLOSE1 INDEX D:CCASE1' TO H:USEFILE
         ENDIF
         &H:USEFILE
         FIND &M:KEY
         IF # = 0
           STORE '9' TO M:TYPE
           RELEASE ALL LIKE H:*
           RETURN
         ELSE
           STORE # TO M:REC1
           STORE CASE TO M:CASE
           STORE COG TO M:COG
           STORE NSN TO M:NSN
           STORE CAT TO M:CAT
           STORE NOMEN TO M:NOMEN
         STORE UIC TO M:UIC
         STORE UI TO M:UI
         STORE QTYDEF TO M:QTYDEF
         STORE UPRC TO M:UPRC
         STORE EPRC TO M:EPRC
         STORE ORG TO M:ORG
         STORE DOC TO M:DOC
         STORE DOCNO TO M:DOCNO
         STORE DATES TO M:DATES
         STORE REPCON TO M:REPCON
         STORE FSCM TO M:FSCM
         STORE TIME TO M:TIME
         STORE WHO TO M:WHO
         STORE NUM TO M:NUM
         STORE CR TO M:CR
         STORE SCR TO M:SCR
         STORE SM TO M:SM
         STORE O9Q TO M:O9Q
         STORE DEF TO M:DEF
         STORE VIC TO M:VIC
         STORE ACTPT TO M:ACTPT
         STORE SCRQTY TO M:SCRQTY
         STORE '0' TO M:TYPE
         RELEASE ALL LIKE H:*
         RETURN
      ENDIF
    ELSE
      IF $(M:TYPE,2,1) = 'H' .OR. $(M:TYPE,2,1) = 'I'
          USE D:CLCSE1
          GOTO M:REC1
          IF # <> M:REC1
            STORE '9' TO M:TYPE
            RELEASE ALL LIKE H:*
            RETURN
          ELSE
            IF $(M:TYPE,2,1) = 'I'
              SKIP
            ENDIF
            STORE # TO M:REC1
            STORE CASE TO M:CASE
            STORE COG TO M:COG
            STORE NSN TO M:NSN
            STORE CAT TO M:CAT
            STORE NOMEN TO M:NOMEN
            STORE UIC TO M:UIC
            STORE UI TO M:UI
            STORE QTYDEF TO M:QTYDEF
            STORE UPRC TO M:UPRC
            STORE EPRC TO M:EPRC
            STORE ORG TO M:ORG
            STORE DOC TO M:DOC
            STORE DOCNO TO M:DOCNO
            STORE DATES TO M:DATES
            STORE REPCON TO M:REPCON
            STORE FSCM TO M:FSCM
            STORE TIME TO M:TIME
            STORE WHO TO M:WHO
            STORE NUM TO M:NUM
            STORE CR TO M:CR
            STORE SCR TO M:SCR
            STORE SM TO M:SM
            STORE O9Q TO M:O9Q
            STORE DEF TO M:DEF
            STORE VIC TO M:VIC
            STORE ACTPT TO M:ACTPT
            STORE SCRQTY TO M:SCRQTY
            STORE '0' TO M:TYPE
            RELEASE ALL LIKE H:*
            RETURN
          ENDIF
       ELSE
          STORE T TO H:FAIL
          DO WHILE H:FAIL
             STORE 0 TO H:LOOPCNTR
             STORE 2 TO H:CNTR
             USE D:FILESTAT
             DO WHILE CLOSE1<>'     '
                STORE H:CNTR-1 TO H:CNTR
                IF H:CNTR=0
                   STORE 2 TO H:CNTR
                   STORE H:LOOPCNTR+1 TO H:LOOPCNTR
                ENDIF
                IF H:LOOPCNTR=2
                @ 23,16 SAY 'CLOSE CASE FILE CURRENTLY IN';
                           + ' USE - PLEASE STANDBY'
                ENDIF
                USE
                USE D:FILESTAT
                STORE 1 TO H:DELAY
                DO WHILE H:DELAY < 5
                  STORE H:DELAY + 1 TO H:DELAY
                ENDDO
             ENDDO
             @ 23,16 SAY '                              ';
                      + '                   '
*            @ 23,16 SAY '              FILE LOCKED  BY ';
                      + 'CLOSE1               '
             REPL CLOSE1 WITH C:WHO
             USE
             IF $(M:TYPE,2,1) = 'C'
                USE D:FILESTAT
                IF CLOSE1 = C:WHO
                   STORE '          ' TO M:TIME
                   USE D:CLOSE1 INDEX D:CNSN, D:CCASE1
                   GOTO M:REC1
REPL CASE WITH !(M:CASE),COG WITH !(M:COG),NSN WITH ;
!(M:NSN),CAT WITH !(M:CAT),NOMEN WITH !(M:NOMEN),UIC WITH ;
!(M:UIC),UI WITH !(M:UI),QTYDEF WITH M:QTYDEF,UPRC WITH ;
M:UPRC,EPRC WITH M:EPRC,ORG WITH !(M:ORG),DOC WITH !(M:DOC)
REPL DOCNO WITH !(M:DOCNO),DATES WITH !(M:DATES),REPCON ;
WITH !(M:REPCON),FSCM WITH !(M:FSCM),TIME WITH !(M:TIME),;
WHO WITH !(M:WHO),NUM WITH !(M:NUM),CR WITH !(M:CR),SCR ;
WITH !(M:SCR),SM WITH !(M:SM),09Q WITH !(M:09Q)
REPL DEF WITH M:DEF,VLC WITH !(M:VLC),ACTPT WITH ;
!(M:ACTPT),SCRQTY WITH M:SCRQTY
                   STORE '0' TO M:TYPE
                   USE
                   USE D:FILESTAT
                   REPL CLOSE1 WITH '     '
                   USE
                   RELEASE ALL LIKE H:*
                   RETURN
                ENDIF
             ELSE
                IF $(M:TYPE,2,1)='D' .OR. $(M:TYPE,2,1)='E'
                   IF $(M:TYPE,2,1) = 'D'
                      STORE 'USE D:CLOSE1 INDEX D:CNSN, ';
                            + 'D:CCASE1' TO H:USEFILE
                   ELSE
                      STORE 'USE D:CLOSE1 INDEX D:CCASE1,';
                           + ' D:CNSN' TO H:USEFILE
                   ENDIF
                   USE D:FILESTAT
                   IF CLOSE1 = C:WHO
                      &H:USEFILE
                      FIND &M:KEY
                      IF # = 0
                         STORE '9' TO M:TYPE
```

```
         USE D:FILESTAT
         REPLACE CLOSE1 WITH '      '
         USE
         RELEASE ALL LIKE H:*
         RETURN
      ELSE
         IF  TIME <> '            '
            STORE '1' TO M:TYPE
            RELEASE ALL LIKE H:*
            USE D:FILESTAT
            REPLACE CLOSE1 WITH '      '
            USE
            RETURN
         ELSE
            STORE   TO H:DUMMY
            POKE 61440, 180, 44, 205, 33,;
               137, 22, 13, 240, 137, 14,;
               15, 240, 195
            SET CALL TO 61440
            CALL H:DUMMY
            STORE STR(PEEK(61456),2) TC ;
                 H:HOUR
            STORE STR(PEEK(61455),2) TC ;
                 H:MIN
            STORE STR(PEEK(61454),2) TC ;
                 H:SEC
            IF $(H:HOUR,1,1)=
               STORE 0 +$(H:HOUR,2,1) ;
                    TO H:HOUR
            ENDIF
            IF $(H:MIN,1,1)=
               STORE 0+$(H:MIN,2,1) TO ;
                  H:MIN
            ENDIF
            IF $(H:SEC,1,1)=
               STORE 0+$(H:SEC,2,1) TO ;
                  H:SEC
            ENDIF
            STORE C:JULIAN+H:HOUR +H:MIN+;
                  H:SEC TO M:TIME
            REPL TIME WITH M:TIME
            STORE # TO M:REC1
            STORE CASE TO M:CASE
            STORE COG TO M:COG
            STORE NSN TO M:NSN
            STORE CAT TO M:CAT
            STORE NOMEN TO M:NOMEN
            STORE UIC TO M:UIC
            STORE UI TO M:UI
            STORE QTYDEF TO M:QTYDEF
            STORE UPRC TO M:UPRC
            STORE EPRC TO M:EPRC
            STORE ORG TO M:ORG
            STORE DOC TO M:DOC
            STORE DOCNO TO M:DOCNO
            STORE DATES TO M:DATES
            STORE REPCON TO M:REPCON
            STORE FSCM TO M:FSCM
            STORE TIME TO M:TIME
            STORE WHO TO M:WHO
            STORE NUM TO M:NUM
            STORE CR TO M:CR
            STORE SCR TO M:SCR
            STORE SM TO M:SM
            STORE O9Q TO M:O9Q
            STORE DEF TO M:DEF
            STORE VLC TO M:VLC
            STORE ACTPT TO M:ACTPT
            STORE SCRQTY TO M:SCRQTY
```

```
                             STORE '0' TO M:TYPE
                             USE D:FILESTAT
                             REPL CLOSE1 WITH '      '
                             USE
                             RELEASE ALL LIKE H:*
                             RETURN
                          ENDIF
                       ENDIF
                    ENDIF
                 ELSE

*****  FOR TYPE F, A NEW RECORD IS CREATED BY TRANSFERRING
*****  DATA FROM THE OPEN FILE TO THE CLOSE FILE

                    IF $(M:TYPE,2,1) = 'F'
                       USE D:FILESTAT
                       IF CLOSE1 = C:WHO
                          @ 23,25 SAY '      UPDATING CASE';
                                + ' FILE          '
                          USE D:CLOSE1 INDEX D:CCASE1, ;
                              D:CNSN
                          APPEND BLANK

REPL CASE WITH !(M:CASE),COG WITH !(M:COG),NSN WITH ;
!(M:NSN),CAT WITH !(M:CAT),NOMEN WITH !(M:NOMEN),UIC WITH;
 !(M:UIC),UI WITH !(M:UI),QTYDEF WITH M:QTYDEF,UPRC WITH ;
M:UPRC,EPRC WITH M:EPRC,ORG WITH !(M:ORG),DOC WITH !(M:DOC)
REPL DOCNO WITH !(M:DOCNO),DATES WITH !(M:DATES),REFCON ;
WITH !(M:REFCON),FSCM WITH !(M:FSCM),TIME WITH !(M:TIME),;
WHO WITH !(C:WHO),NUM WITH !(M:NUM),SM WITH !(M:SM),O9Q ;
WITH !(M:O9Q),DEF WITH M:DEF,ACTPT WITH !(M:ACTPT)

                          STORE '0' TO M:TYPE
                          USE D:FILESTAT
                          REPL CLOSE1 WITH '      '
                          USE
                          @ 23,25 SAY '                        ';
                                + '              '
                          RELEASE ALL LIKE H:*
                          RETURN
                       ENDIF
                    ELSE
                       IF $(M:TYPE,2,1) = 'G'
                          USE D:FILESTAT
                          IF CLOSE1 = C:WHO
                             USE D:CLOSE1
                             GOTO M:REC1
                             IF TIME = M:TIME
                                REPL TIME WITH '              '
                             ENDIF
                             USE D:FILESTAT
                             REPL CLOSE1 WITH '      '
                             USE
                          ENDIF
                          RELEASE ALL LIKE H:*
                          RETURN
                       ENDIF
                    ENDIF
                 ENDIF
              ENDIF -
           ENDDO
        ENDIF
      ENDIF

*****  TYPE 4 USES CLOSE2 DATA BASE FILE

   CASE $(M:TYPE,1,1) = '4'
      IF $(M:TYPE,2,1) = 'A' .OR. $(M:TYPE,2,1) = 'B'
         USE D:CLOSE2 INDEX D:CCASE2
         FIND &M:KEY
         IF # = 0
           STORE '9' TO M:TYPE
           RELEASE ALL LIKE H:*
           RETURN
         ELSE
           STORE # TO M:REC1
           STORE CASE TO M:CASE
           STORE QTYINS TO M:QTYINS
           STORE QTYREC TO M:QTYREC
           STORE QTYSTK TO M:QTYSTK
           STORE DEFV TO M:DEFV
           STORE DEFR TO M:DEFR
           STORE ITEM TO M:ITEM
           STORE OVER TO M:OVER
           STORE OTF TO M:OTF
           STORE GOV TO M:GOV
           STORE TIME TO M:TIME
           STORE WHO TO M:WHO
           STORE DITEM TO M:DITEM
           STORE CCOST TO M:CCOST
           STORE WNTY TO M:WNTY
           STORE WUC TO M:WUC
           STORE DIS TO M:DIS
           STORE DETAILS TO M:DETAILS
           STORE REPLY TO M:REPLY
           STORE ACTTKN TO M:ACTTKN
           STORE COSTC TO M:COSTC
           STORE STATUSC TO M:STATUSC
           STORE CAUSEC TO M:CAUSEC
           STORE RETC TO M:RETC
           STORE ACTDISP TO M:ACTDISP
           STORE MFG TO M:MFG
           STORE LOT TO M:LOT
           STORE '0' TO M:TYPE
           RELEASE ALL LIKE H:*
           RETURN
        ENDIF
      ELSE
        IF $(M:TYPE,2,1) = 'H' .OR. $(M:TYPE,2,1) = 'I'
            USE D:CLCSE2
            GOTO M:REC1
            IF # <> M:REC1
              STORE '9' TO M:TYPE
              RELEASE ALL LIKE H:*
              RETURN
            ELSE
              IF $(M:TYPE,2,1) = 'I'
                 SKIP
              ENDIF
              STORE # TO M:REC1
              STORE CASE TO M:CASE
              STORE QTYINS TO M:QTYINS
              STORE QTYREC TO M:QTYREC
              STORE QTYSTK TO M:QTYSTK
              STORE DEFV TO M:DEFV
              STORE DEFR TO M:DEFR
              STORE ITEM TO M:ITEM
              STORE OVER TO M:OVER
              STORE OTF TO M:OTF
              STORE GOV TO M:GOV
              STORE TIME TO M:TIME
              STORE WHO TO M:WHO
              STORE DITEM TO M:DITEM
              STORE CCOST TO M:CCOST
              STORE WNTY TO M:WNTY
              STORE WUC TO M:WUC
              STORE DIS TO M:DIS
              STORE DETAILS TO M:DETAILS
```

```
                    STORE REPLY TO M:REPLY
                    STORE ACTTKN TO M:ACTTKN
                    STORE COSTC TO M:COSTC
                    STORE STATUSC TO M:STATUSC
                    STORE CAUSEC TO M:CAUSEC
                    STORE RETC TO M:RETC
                    STORE ACTDISP TO M:ACTDISP
                    STORE MFG TO M:MFG
                    STORE LOT TO M:LOT
                    STORE '0' TO M:TYPE
                    RELEASE ALL LIKE H:*
                    RETURN
                ENDIF
            ELSE
                STORE T TO H:FAIL
                DO WHILE H:FAIL
                    STORE 0 TO H:LOOPCNTR
                    STORE 2 TO H:CNTR
                    USE D:FILESTAT
                    DO WHILE CLOSE2<>'     '
                        STORE H:CNTR-1 TO H:CNTR
                        IF H:CNTR=0
                            STORE 2 TO H:CNTR
                            STORE H:LOOPCNTR+1 TO H:LOOPCNTR
                        ENDIF
                        IF H:LOOPCNTR=2
                        @ 23,16 SAY 'CLOSE CASE FILE CURRENTLY IN USE ';
                          + '- PLEASE STANDBY'
                        ENDIF
                        USE
                        USE D:FILESTAT
                        STORE 1 TO H:DELAY
                        DO WHILE H:DELAY < 5
                          STORE H:DELAY + 1 TO H:DELAY
                        ENDDO
                    ENDDO
                    @ 23,16 SAY '
                    REPL CLOSE2 WITH C:WHO
                    USE
                    IF $(M:TYPE,2,1) = 'C'
                        USE D:FILESTAT
                        IF CLOSE2 = C:WHO
                            STORE '           ' TO M:TIME
                            USE D:CLOSE2 INDEX D:CCASE2
                            GOTO M:REC1
REPL CASE WITH !(M:CASE),QTYINS WITH M:QTYINS,QTYREC ;
WITH M:QTYREC,QTYSTK WITH M:QTYSTK,DEFV WITH !(M:DEFV),;
DEFR WITH !(M:DEFR),ITEM WITH !(M:ITEM),OVER WITH ;
!(M:OVER),OTF WITH !(OTF),GOV WITH !(M:GOV),TIME WITH ;
!(M:TIME)
REPL WHO WITH !(M:WHO),DITEM WITH !(M:DITEM),CCOST WITH ;
M:CCOST,WNTY WITH !(M:WNTY),WUC WITH !(M:WUC),DIS WITH ;
!(M:DIS),DETAILS WITH !(M:DETAILS), REPLY WITH !(M:REPLY),;
ACTTKN WITH !(M:ACTTKN),COSTC WITH !(M:COSTC)
REPL STATUSC WITH !(M:STATUSC),CAUSEC WITH !(M:CAUSEC),;
RETC WITH !(M:RETC),ACTDISP WITH !(M:ACTDISP),MFG WITH ;
!(M:MFG),LOT WITH !(M:LOT)
                            STORE '0' TO M:TYPE
                            USE
                            USE D:FILESTAT
                            REPL CLOSE2 WITH '     '
                            USE
                            RELEASE ALL LIKE H:*
                            RETURN
                        ENDIF
                    ELSE
                        IF $(M:TYPE,2,1) = 'D' .OR. $(M:TYPE,2,1) = 'E'
                            USE D:FILESTAT
                            IF CLOSE2 = C:WHO
```

```
USE D:CLOSE2 INDEX D:CCASE2
FIND &M:KEY
IF # = 0
   STORE '9' TO M:TYPE
   USE D:FILESTAT
   REPLACE CLOSE2 WITH '    '
   USE
   RELEASE ALL LIKE H:*
   RETURN
ELSE
   IF  TIME <> '        '
      STORE '1' TO M:TYPE
      RELEASE ALL LIKE H:*
      USE D:FILESTAT
      REPLACE CLOSE2 WITH '    '
      USE
      RETURN
   ELSE
      STORE   TO H:DUMMY
      POKE 61440, 180, 44, 205, 33, 137, ;
        22, 13, 240, 137, 14, 15, 240, 195
      SET CALL TO 61440
      CALL H:DUMMY
      STORE STR(PEEK(61456),2)  TO H:HOUR
      STORE STR(PEEK(61455),2)  TO H:MIN
      STORE STR(PEEK(61454),2)  TO H:SEC
      IF $(H:HOUR,1,1)=
         STORE 0 +$(H:HOUR,2,1)  TO H:HOUR
      ENDIF
      IF $(H:MIN,1,1)=
         STORE 0+$(H:MIN,2,1)  TO H:MIN
      ENDIF
      IF $(H:SEC,1,1)=
         STORE 0+$(H:SEC,2,1)  TO H:SEC
      ENDIF
      STORE C:JULIAN+H:HOUR+H:MIN+H:SEC;
         TO M:TIME
      REPL TIME WITH M:TIME
      STORE # TO M:REC1
      STORE CASE TO M:CASE
      STORE QTYINS TO M:QTYINS
      STORE QTYREC TO M:QTYREC
      STORE QTYSTK TO M:QTYSTK
      STORE DEFV  TO M:DEFV
      STORE DEFR  TO M:DEFR
      STORE ITEM  TO M:ITEM
      STORE OVER  TO M:OVER
      STORE OTF TO M:OTF
      STORE GOV TO M:GOV
      STORE TIME TO M:TIME
      STORE WHO TO M:WHO
      STORE DITEM TO M:DITEM
      STORE CCOST TO M:CCOST
      STORE WNTY  TO M:WNTY
      STORE WUC TO M:WUC
      STORE DIS TO M:DIS
      STORE DETAILS TO M:DETAILS
      STORE REPLY TO M:REPLY
      STORE ACTTKN  TO M:ACTTKN
      STORE COSTC TO M:COSTC
      STORE STATUSC  TO M:STATUSC
      STORE CAUSEC TO M:CAUSEC
      STORE RETC  TO M:RETC
      STORE ACTDISP TO M:ACTDISP
      STORE MFG  TO M:MFG
      STORE LOT  TO M:LOT
      STORE '0'  TO M:TYPE
      USE D:FILESTAT
      REPL CLOSE2 WITH '    '
```

```
                             USE
                             RELEASE ALL LIKE H:*
                             RETURN
                          ENDIF
                       ENDIF
                    ENDIF
                 ELSE

*****  FOR TYPE F, A NEW RECORD IS CREATED BY TRANSFERRING
*****  DATA FROM THE OPEN FILE TO THE CLOSE FILE

                    IF $(M:TYPE,2,1) = 'F'
                       USE D:FILESTAT
                       IF CLOSE2 = C:WHO
                          USE D:OPEN2 INDEX D:OCASE2
                          FIND &M:CASE
                          IF # <> 0
                                      + ' FILE       '
                             USE D:CLOSE2 INDEX D:CCASE2
                             APPEND BLANK

REPL CASE WITH ! (M:CASE),QTYINS WITH M:QTYINS,QTYREC WITH;
 M:QTYREC,QTYSTK WITH M:QTYSTK,DEFV WITH !(M:DEFV),DEFR ;
WITH !(M:DEFR),ITEM WITH !(M:ITEM),OVER WITH !(M:OVER),;
CTF WITH !(OTF),GOV WITH !(M:GOV),TIME WITH !(M:TIME)
REPL WHO WITH !(C:WHO),DITEM WITH !(M:DITEM),WNTY WITH ;
!(M:WNTY),WUC WITH !(M:WUC),DIS WITH !(M:DIS),DETAILS ;
WITH !(M:DETAILS),ACTDISP WITH !(M:ACTDISP),MFG WITH ;
!(M:MFG),LOT WITH !(M:LOT)

                             STORE '0' TO M:TYPE
                             USE D:FILESTAT
                             REPL CLOSE2 WITH '    '
                             USE
                             @ 23,25 SAY '                    ';
                                     + '               '
                             RELEASE ALL LIKE H:*
                             RETURN
                          ENDIF
                       ENDIF
                    ELSE
                       IF $(M:TYPE,2,1) = 'G'
                          USE D:FILESTAT
                          IF CLOSE2 = C:WHO
                             USE D:CLOSE2
                             GOTO M:REC1
                             IF TIME = M:TIME
                                REPL TIME WITH '            '
                             ENDIF
                             USE D:FILESTAT
                             REPL CLOSE2 WITH '    '
                             USE
                          ENDIF
                          RELEASE ALL LIKE H:*
                          RETURN
                       ENDIF
                    ENDIF
                 ENDIF
              ENDIF
           ENDDO
        ENDIF
      ENDIF
ENDCASE
RETURN

***** END OF PROGRAM
```

VIII. SUPERVISOR MENU

```
*************************************************************
**                                                         **
**   DATE: 11 JANUARY 1984                                 **
**   VERSICN: 1.0                                          **
**   MODUIE NAME: SUPMENU1                                 **
**   MODULE PURPOSE: PROVIDE MENU FOR SUPERVISOR TO        **
**          ACCESS QDF SYSTEM PROGRAMS                     **
**                                                         **
**   MODUIE INTERFACE DEFINITICN                           **
**      INPUTS: C:WHO. C:JULIAN                            **
**      OUTPUTS: NONE                                      **
**   MODUIE PROCESSING NARRATIVE DESCRIPTION:              **
**                                                         **
**          THE SUPERVISOR IS PRESENTED WITH A MENU OF     **
**          ALL PROSESSING CAPABILITIES AVAILABLE. AFTER   **
**          CNE IS CHCSEN, THE MODULE THEN CALLS THE       **
**          DESIGNATED PROGRAM INTO ACTION OR LOGS THE     **
**          SUPERVISOR CUT OF THE QDR SYSTEM               **
**                                                         **
**   SUPERORDINATE MODULES: LOGON                          **
**   SUBCRDINATE MODULES: MENU1,C-REASGN,UTILMENU,SUPRPTS, **
**                        SUPRPT2                          **
**   AUTHCR: J.G. BCYNTON                                  **
**                                                         **
*************************************************************
ERASE
STORE T TO V:CONTINUE
DO WHILE V:CONTINUE
STORE ' ' TC V:CHOICE
TEXT


                 WELCOME TO THE QDR SUPERVISOR MENU

                   1 - MAIN MENU PROCESSING
                   2 - CASE REASSIGNMENT
                   3 - ANALYST WORKLOAD STATISTICS
                   4 - UTILITY PROGRAMS
                   5 - REPORT GENERATION
                   6 - YEAR END PROCESSING
                   7 - SORTED LISTINGS
                   8 - EXIT FROM THE SYSTEM


                   ENTER YOUR CHOICE

ENDTEXT
@ 21,30 GET V:CHOICE
READ
?
IF    V:CHOICE >= 1 .AND. V:CHOICE <= 8

?
     DO CASE
        CASE V:CHOICE= 1
             RELEASE ALL LIKE V:*
             DO C:MENU1.PRG
```

```
            CASE V:CHOICE= 2
                 RELEASE ALL LIKE V:*
                 DO C:C-REASGN.PRG
            CASE V:CHOICE= 3
                 RELEASE ALL LIKE V:*
                 DO C:STATGEN.PRG
            CASE V:CHOICE= 4
                 RELEASE ALL LIKE V:*
                 DO C:UTILMENU.PRG
            CASE V:CHOICE= 5
                 RELEASE ALL LIKE V:*
                 DO C:SUPRPTS.PRG
            CASE V:CHOICE= 6
                 RELEASE ALL LIKE V:*
                 DO C:YEAREND.PRG
            CASE V:CHOICE=7
                 RELEASE ALL LIKE V:*
                 DO C:SUPRPT2.PRG
            CASE V:CHOICE= 8
                 RELEASE ALL EXCEPT C:*
                 ERASE
                 RETURN
        ENDCASE
        ERASE
        STORE T TO V:CONTINUE
        STORE ' ' TC V:CHOICE
ELSE
   ?' < PLEASE ANSWER WITH  1 - 8 ONLY >'

ENDIF <V:CHOICE>

ENDDO <V:CONTINUE>

***** END OF PROGRAM
```

IX. SUPERVISOR UTILITY MENU

```
***********************************************************
**                                                       **
**   Date: 16 January 1984                               **
**   Version: 1.0                                        **
**   Module Name: UTILMENU                               **
**   Module Purpose: Provide Supervisor with menu of     **
**                   utility programs available to him.  **
**                                                       **
**   Module Interface Definition                         **
**      Inputs: C:WHO, C:JULIAN                          **
**      Outputs: None                                    **
**   Module Processing Narrative Description:            **
**                                                       **
**        Displays menu of all utility programs avail-   **
**        able to the supervisor. Calls the appropriate  **
**        program after user selection. Additional level **
**        of security required for packing Data Base.    **
**                                                       **
**   Superordinate Modules: SUPMENU1                     **
**   Subordinate Modules:  ANALYST,PASS,COGUPDT,ADDRUPDT, **
**                         STATGEN,COGCNT,UTILNDX,DBPACK **
**   Author: J.G. BOYNTON & R.G. NICHOLS                 **
**                                                       **
***********************************************************

STORE T TO U:CONTINUE

*****  Display Options Available To The Operator

DO WHILE U:CONTINUE
   ERASE
   @ 6,25 SAY '***** Utility Processing *****'
   @ 9,29 SAY '1 - Analyst Update'
   @ $+1,29 SAY '2 - Password Processing'
   @ $+1,29 SAY '3 - COG Update'
   @ $+1,29 SAY '4 - Address File Update'
   @ $+1,29 SAY '5 - Internal Statistics Update'
   @ $+1,29 SAY '6 - Cog Count'
   @ $+1,29 SAY '7 - Re-Index Index Files For The System'
   @ $+1,29 SAY '8 - Clean Up The Database (Pack)'
   @ $+1,29 SAY '9 - Exit To Supervisor Menu'
   STORE ' 'TO U:REPLY
   @ 19,40 GET U:REPLY PICTURE '9'
   READ

*****  Accept Menu Selection

   DO WHILE U:REPLY < '1' .OR. U:REPLY > '9'
      @ 23,32 SAY 'Enter 1 - 9 Only' + CHR(7)
      @ 19,40 GET U:REPLY PICTURE '9'
      READ
   ENDDO

*****  Call Routine Necessary To Perform Desired Function

   DO CASE
      CASE U:REPLY = '9'
```

```
         RELEASE ALL LIKE U:*
         RETURN
      CASE U:REPLY = '1'
         DO C:ANALYST
      CASE U:REPLY = '2'
         DO C:PASS
      CASE U:REPLY = '3'
         DO C:COGUPDT
      CASE U:REPLY = '4'
         DO C:ADDRUPDT
      CASE U:REPLY = '5'
         DO C:STATGEN
      CASE U:REPLY = '6'
         DO C:COGCNT
      CASE U:REPLY = '7'

*****  Display Warning To The Operator

         ERASE
         @  1,25 SAY '***** Data Base Reindex *****'
         @  3,24 SAY '* * * * * * * * * * * * * * * * *  '
         @  4,24 SAY '*                               *  '
         @  5,24 SAY '*             WARNING           *  '
         @  6,24 SAY '*                               *  '
         @  7,24 SAY '*   This Program Will Delete    *  '
         @  8,24 SAY '*   All Index Files and Then    *  '
         @  9,24 SAY '*   Will Re-Index All Files     *  '
         @ 10,24 SAY '*                               *  '
         @ 11,24 SAY '*   If Existing Files Are       *  '
         @ 12,24 SAY '*   Large, This Could Take      *  '
         @ 13,24 SAY '*            Hours              *  '
         @ 14,24 SAY '*                               *  '
         @ 15,24 SAY '* * * * * * * * * * * * * * * * *  '
         @ 17,24 SAY '     Are You SURE You Want To'
         @ 18,24 SAY '           Continue'
         @ 19,24 SAY '        <Enter Y or N>' + CHR(7)
         STORE ' ' TO U:REPLY2
         @ 21,40 GET U:REPLY2
         READ

*****  Accept Response From User

         DO WHILE !(U:REPLY2)<>'Y' .AND. !(U:REPLY2)<>'N'
            @ 23,32 SAY 'Enter Y or N Only' + CHR(7)
            @ 21,40 GET U:REPLY2 PICTURE 'A'
            READ
         ENDDO
         @ 23,32 SAY '                    '
         @ 17,40 SAY ' '

***** Accept and Verify Password Before Executing Request

         IF U:REPLY2 = 'Y'
            @ 21,30 SAY 'Enter Your Password '
            STORE '          ' TO U:PASSWORD
            SET CONSOLE OFF
            ACCEPT TO U:PASSWORD
            SET CONSOLE ON
            IF U:PASSWORD <> '         '
               USE D:TECHCODE INDEX D:TECH
               FIND &C:WHO
               IF PSWD = U:PASSWORD .AND. # <> 0
                  DO C:UTILNDX
               ELSE
                  @ 23,18 SAY 'Request ABORTED - Strike ';
                         +'Any Key To Continue'
                  WAIT
               ENDIF
            ENDIF
         ENDIF
      CASE U:REPLY = '8'
         DO C:DBPACK
   ENDCASE
ENDDO

***** END OF PROGRAM
```

X. USER REPORT MENU

```
***********************************************************************
**                                                                  **
**   Date: 11 January 1984                                          **
**   Version: 1.0                                                   **
**   Module Name: RPTMENU                                           **
**   Module Purpose: Allow analyst to receive a listing             **
**                   of his current open cases.                     **
**   Module Interface Definition                                    **
**      Inputs: C:WHO, C:JULIAN                                     **
**      Outputs: None                                               **
**   Module Processing Narrative Description:                       **
**                                                                  **
**          Menu is provided in order to select a listing           **
**          of open cases that belong to the Analyst                **
**          making the request. If report listing is                **
**          chosen, then module OCASERPT is called. Exit            **
**          is to return to MENU1.                                  **
**   Superordinate Modules: MENU1                                   **
**   Subordinate Modules: OCASERPT                                  **
**   Author: J.G. BOYNTON                                           **
**                                                                  **
***********************************************************************
STORE T TO C:TRUE
DO WHILE C:TRUE
ERASE
*
STORE ' ' TO V:CHOICE
TEXT

                         *****  QUERY REPORT AVAILABLE  *****


                                1 - Openfile by Case
                                2 - Exit






                                Enter Your Choice

ENDTEXT
@ 19,38 GET V:CHOICE
READ
*
IF V:CHOICE >= '1' .AND. V:CHOICE <= '2'
*
    DO CASE
       CASE V:CHOICE = '1'
            DO C:OCASERPT
       CASE V:CHOICE = '2'
            STORE F TO C:TRUE
    ENDCASE

ELSE
  ?  '             < Please Answer With a 1 - 2 ONLY >'
  ?
  ? '                         PRESS ANY KEY TO CONTINUE'
  ?
                                   WAIT
ENDIF <V:CHOICE>
ENDDO <C:TRUE>
RELEASE ALL LIKE V:*
RELEASE C:TRUE

***** END OF PROGRAM
```

XI. SUPERVISOR REPORT MENU

```
***************************************************************
**                                                           **
**   Date: 15 January 1984                                   **
**   Version: 1.0                                            **
**   Module Name: SUPRPTS                                    **
**   Module Purpose: Provide Supervisor a menu of            **
**                  available reports.                       **
**                                                           **
**   Module Interface Definition                             **
**      Inputs: C:WHO, C:JULIAN                              **
**      Outputs: None                                        **
**   Module Processing Narrative Description:                **
**                                                           **
**      Displays a menu of available reports and prompts     **
**      Supervisor to chose one or return to SUPMENU1.       **
**      Weekly and Monthly reports are directed to the       **
**      printer. CategoryI and Extended value reports        **
**      are created in text files on D: drive and may be     **
**      printed by 'typing' the file using standard          **
**      operating system functions. All reports should       **
**      be run only during 'off' hours due to their          **
**      large amount of resource utilization.                **
**                                                           **
**   Superordinate Modules: SUPMENU1                         **
**   Subordinate Modules: XXBWSTAT,XXMNSTAT,CATIRPT,EXTVAL   **
**   Author: J.G. BOYNTON                                    **
**                                                           **
***************************************************************

ERASE
STORE T TO V:CONTINUE
DO WHILE V:CONTINUE
SET TALK OFF
STORE ' ' TO V:CHOICE
TEXT


                    WELCOME TO THE QDR SPECIAL REPORT MENU

                         1 - Biweekly Statistics Report
                         2 - Monthly Statistics Report
                         3 - Category I Report
                         4 - Extended Value Report
                         5 - Exit to Supervisor Menu

                              Enter your choice

ENDTEXT
@ 19,35 GET V:CHOICE
READ
?
IF    V:CHOICE >= "1" .AND. V:CHOICE <= "5"

   IF V:CHOICE = "1" .OR. V:CHOICE = "2"
      ERASE
      @  3,15 SAY '** YOUR PRINTER MUST BE TURNED ON AND';
                 +'AVAILABLE **'
      @ 12,20 SAY '        PRESS ANY KEY TO START'
      WAIT
      @ 22,10 SAY '                              '
   ENDIF
?
     DO CASE
         CASE V:CHOICE= "1"
              RELEASE ALL LIKE V:*
              DO C:XXEISTAT.PRG
         CASE V:CHOICE= "2"
              RELEASE ALL LIKE V:*
              DO C:XXMNSTAT.PRG
         CASE V:CHOICE= "3"
              RELEASE ALL LIKE V:*
              USE D:CFEN1 INDEX D:OCASE1
              SET TALK OFF
              STORE 0 TO P:COUNT
              STORE 0 TO P:TOTAL
              SET FORMAT TO SCREEN
              ERASE
              SET ALTERNATE TO D:CATIRPT
              SET ALTERNATE ON
              ?      'Date: ',DATE()
              ?
              ?   '                    *****      QDR';
              +' CATEGORY I REPORT     *****       '
              ?
              ?   '       CASE #          EXTENDED PRICE';
              +'         OPEN DATE         COG  '
              ?
              STORE 0 TO P:PAGE
              STORE 5 TO ROW
              DO WHILE  .NOT. EOF
                  STORE P:TOTAL+1 TO P:TOTAL
                  IF CAT='1'
                      ? '      ',CASE,'      ',EPRC,;
                      '          ',$(DATES,11,5),;
                      '          ',COG
                      STORE ROW+1 TO ROW
                      SKIP
                      STORE P:COUNT+1 TO P:COUNT
                      IF ROW > 60
                          ERASE
                          ? CHR(12)
                          STORE 0 TO ROW
                          STORE P:PAGE+1 TO P:PAGE
                          ?
                          ?
                          ? '     PAGE   ',P:PAGE
                          ?
                          ?      '       CASE #          EXT';
                          +'ENDED PRICE          OPEN DATE';
                          +'         COG   '
                          ?
                          STORE ROW+4 TO ROW
                     ENDIF <PAGE IS FULL>
                  ELSE
                     SKIP
                  ENDIF <NOT CAT I>
              ENDDO
              ?
              ?
              ?
              ?
              ?   '     CAT 1 CASES:',P:COUNT
              ?   '     TOTAL CASES:',P:TOTAL
              ?
              ?
              ?   '                *****     END OF CAT';
     +'EGORY I REPORT      *****'
     ? CHR(12)
     SET ALTERNATE OFF
     SET ALTERNATE TO
     ? CHR(7)
     ? CHR(7)
     ERASE
     @ 12,20 SAY ' You May Receive Your Cat 1 ';
                +'  Report On '
     @ 13,20 SAY '            D:CATIRPT.TXT  '
     @ 20,20 SAY '      Press Any Key To Continue'
     WAIT

CASE V:CHOICE= "4"
     RELEASE ALL LIKE V:*
     USE D:OPEN1 INDEX D:EXTVAL
     REINDEX
     GOTO TOP
     SKIP
     SET TALK OFF
     STORE 0 TO P:COUNT
     STORE 0 TO P:TOTAL
     SET FORMAT TO SCREEN
     ERASE
     SET ALTERNATE TO D:EXTVALUE
     SET ALTERNATE ON
     ?      'Date: ',DATE()
     ?
     ?     '                   *****        QDR';
     +' EXTENDED VALUE REPORT       *****       '
     ?
     ?     '                                            ';
     +'                                             ';
     +'                        SCREENING'
     ?     '     CASE #   COG    SM                  ';
     +'NSN             CAT      NOMEN          UIC      ';
     +'EXT PRICE     OPEN DATE     CODE/DATE'
     ?
     STORE 0 TO P:PAGE
     STORE 6 TO ROW
     DO WHILE  .NOT. EOF
             STORE P:TOTAL+1 TO P:TOTAL
             ? '   ',CASE,' ',COG,' ',SM,' ',;
             $(NSN,1,4),'-',$(NSN,5,2),'-',;
             $(NSN,7,7),'   ',CAT,' ',;
             $(NOMEN,1,10),' ',UIC,' ',EPRC,;
             '    ',$(DATES,11,5),'   ',SCR,'/',;
             $(DATES,21,5)
             STORE ROW+1 TO ROW
             STORE P:COUNT+1 TO P:COUNT
             IF ROW > 60
                 ERASE
                 ? CHR(12)
                 STORE 0 TO ROW
                 STORE P:PAGE+1 TO P:PAGE
                 ?
                 ?
                 ? '     PAGE   ',P:PAGE
                 ?
                 ?  '                         ';
                 +'                           ';
                 +'                           ';
                 +'          SCREENING'
                 ?  '       CASE #    COG    SM  ';
                 +'   NSN              CAT      NOMEN';
                 +'       UIC     EXT PRICE     OPEN';
                 +'DATE  CODE/DATE'
                 ?
                 STORE ROW+4 TO ROW
```

```
                    ENDIF <PAGE IS FULL>
                    SKIP
                ENDDO
                ?
                ?
                ?
                ?
                ?  '      TOTAL CASES:',P:TOTAL
                ?
                ?
                ?  '                   *****     END OF ';
                +'EXTENDED VALUE REPORT   *****'
                ? CHR(12)
                SET ALTERNATE OFF
                SET ALTERNATE TO
                ? CHR(7)
                ? CHR(7)
                ERASE
                @ 12,20 SAY ' You May Receive Your Extended';
                          +'  Value Report On '
                @ 13,20 SAY '             D:EXTVALUE.TXT  '
                @ 20,20 SAY '        Press Any Key To Continue'
                WAIT
            CASE V:CHOICE= "5"
                ERASE
                RETURN
        ENDCASE
        ERASE

        STORE T TO V:CONTINUE
        STORE ' ' TO V:CHOICE
ELSE
  ?' < Please Answer With  1 - 5 ONLY >'

ENDIF <V:CHCICE>

ENDDO <V:CONTINUE>

***** END OF PROGRAM
```

XII. QUERY MODULE

```
****************************************************************
**                                                            **
**   Date: 23 Nov 1983                                        **
**   Version: 1.0                                             **
**   Module Name: QUERY                                       **
**   Module Purpose: Free Format Query Against the OPEN       **
**                   and CLOSED Data Files                    **
**                                                            **
**   Module Interface Definition                              **
**      Inputs: C:WHO, C:JULIAN                               **
**      Outputs: None                                         **
**                                                            **
**   Module Processing Narrative Description:                 **
**                                                            **
**         Accepts Selection and Display Parameters from      **
**         the user and generates the necessary Data Base     **
**         Commands to extract the desired information.       **
**         Temporary files are created as the QUERY is        **
**         being processed.  These files are deleted upon     **
**         exiting.  The user may either print or display     **
**         the information extracted.                         **
**                                                            **
**   Superordinate Modules: MENU1                             **
**   Subordinate Modules: None                                **
**   Author: R. G. NICHOLS                                    **
**                                                            **
****************************************************************

*****  Display Menu Selection Options and Accept Response

*SET COLOR TO 112, 6
STORE ' ' TO Q:REPLY
ERASE
@ 6,26 SAY '***** Query Processing *****'
@ 10,27 SAY 'THIS PROGRAM ALLOWS YOU TO'
@ 12,28 SAY 'QUERY THE QDR DATA BASE'
@ 15,32 SAY '1 - Continue'
@ 17,32 SAY '2 - Return to Menu'
@ 20,40 SAY ' ' GET Q:REPLY
READ
DO WHILE Q:REPLY <> '1' .AND. Q:REPLY <> '2'
   @ 23,20 SAY 'Enter 1 or 2 for Your Response'+chr(7)
   @ 20,40 SAY ' ' GET Q:REPLY
   READ
ENDDO

*****  If Response is to Exit Release all Memory Variables
*****  and Return to MENU1

IF Q:REPLY = '2'
   RELEASE ALL LIKE Q:*
   RETURN
ENDIF

*****  Allow User to Select Files to Run The Query Against

STORE ' ' TO Q:REPLY
ERASE
@ 6,24 SAY ' ***  Query Processing Module ***'
@ 10,20 SAY 'Select File(s) to be Used for this Query'
@ 12,25 SAY '1 - OPEN FILE'
@ 14,25 SAY '2 - CLOSED FILE'
@ 16,25 SAY '3 - Merged OPEN and CLOSED File'
@ 20,40 GET Q:REPLY PICTURE '9'
READ
DO WHILE Q:REPLY<>'1' .AND. Q:REPLY<>'2' .AND.Q:REPLY<>'3'
   @ 23,25 SAY 'Entry MUST Be 1, 2, or 3' + CHR(7)
   @ 20,40 GET Q:REPLY PICTURE '9'
   READ
ENDDO

@ 23,28 SAY '                          '
STORE 10 TO Q:CNTR
STORE 'Q:L' + STR(Q:CNTR,2) TO Q:LINE

DO CASE

*****  If OPEN File Is Selected Indicate O File Selection

   CASE Q:REPLY = '1'
      STORE 1 TO Q:NPPASSES
      STORE 'O' TO Q:FILE

*****  If CLOSE File Is Selected Indicate C File Selection

   CASE Q:REPLY = '2'
      STORE 1 TO Q:NPPASSES
      STORE 'C' TO Q:FILE

*****  If OPEN File Is Selected Indicate O File Selection
*****  and Indicate Two Passes Required For Execution of
*****  Generated Code

   CASE Q:REPLY = '3'
      STORE 2 TO Q:NPPASSES
      STORE 'O' TO Q:FILE
ENDCASE
STORE ' ' TO Q:SELCMD1
STORE ' ' TO Q:SELCMD2
STORE '00' TO Q:SELECT
STORE 0 TO Q:ITEM

*****  Start Loop To Accept Selection Criteria

DO WHILE Q:ITEM <= 4 .AND. Q:SELECT <> '58'

*****  Display First Screen of Menu

   IF Q:SELECT = '00'
*  - SCREEN1 MENU -
      ERASE
      @ 2,20 SAY 'Enter Selection Criteria For This Query'
      @ 3,20 SAY '(A Maximum of 5 Items May Be Selected)'
      @ 4,0 SAY '---------------------------------------';
               + '---------------------------------------'
      @ 5,0 SAY 'Data Elements'
      @ 5,25 SAY '!'
*     SET COLOR TO 112,2
      @ 5,27 SAY ' 58  End Element Select'
      @ 5,53 SAY ' 59  Abandon Query'
*     SET COLOR TO 112, 6
      @ 5,51 SAY '!'
      @ 6,25 SAY '!'
      @ 6,51 SAY '!'
      @ 7,1 SAY '01  Case Number'
      @ 7,25 SAY '!  11  Origin Code'
      @ 7,51 SAY '!  21  Interim Repor'
      @ 7,71 SAY 't Date'
      @ 8,1 SAY '02  Cog'
      @ 8,25 SAY '!  12  Type Document'
```

```
        @ 8,51 SAY '!   22  Origin Prep Date'
        @ 9,1 SAY '03   NSN'
        @ 9,25 SAY '!   13  Discovery Date      !';
                  + '   23  Document Number'
        @ 10,1 SAY '04   Category'
        @ 10,25 SAY '!   14  Date Received'
        @ 10,51 SAY '!   24  Report Contro'
        @ 10,71 SAY '1  Number'
        @ 11,1 SAY '05   Nomenclature'
        @ 11,25 SAY '!   15  Open Date'
        @ 11,51 SAY '!   25  FSCM'
        @ 12,1 SAY '06   UIC of Origin'
        @ 12,25 SAY '!   16  Transmittal Date    !';
                  + '   26  Contract Number'
        @ 13,1 SAY '07   Unit of Issue'
        @ 13,25 SAY '!   17  IM Response Date    !';
                  + '   27  Credit Code'
        @ 14,1 SAY '08   Unit Price'
        @ 14,25 SAY '!   18  Close Date'
        @ 14,51 SAY '!   28  Screening Code'
        @ 15,1 SAY '09   Quantity Deficient  !';
                 +'  19  Reopen Date         !  29  SMIC'
        @ 16,1 SAY '10   Extended Price'
        @ 16,25 SAY '!  20  Screen Report'
        @ 16,46 SAY 'Date !  30  Next Page of Elements'
        @ 17,0 SAY '-----------------------------------------';
                + '-----------------------------------------'
        @ 18,0 SAY 'Relations   a - Include    b - Exclude'
        @ 18,42 SAY 'c - Range    d - Equal'
        @ 19,10 SAY 'e - Not Equal        f - Less Than     ';
                + '  g - Greater Than'
        @ 21,27 SAY 'Enter Data Element Number ' GET ;
                   Q:SELECT PICTURE '99'
        READ
        DO WHILE Q:SELECT < '00' .OR. Q:SELECT > '59'
           @ 23,26 SAY 'Select From Above (00 - 59)' + CHR(7)
           @ 21,27 SAY 'Enter Data Element Number ' GET ;
                      Q:SELECT PICTURE '99'
           READ
        ENDDO
        @ 23,26 SAY '                              '
     ELSE

*****  Display Second Screen of Menu

        IF Q:SELECT = '30'
           ERASE
           @ 2,20 SAY 'Enter Selection Criteria For This';
                   + ' Query'
           @ 3,20 SAY '(A Maximum of 5 Items May Be Selected)'
           @ 4,0 SAY '-------------------------------------';
                + '-------------------------------------'
           @ 5,0 SAY 'Data Elements'
           @ 5,25 SAY '!'
*          SET COLOR TO 112,2
           @ 5,27 SAY ' 58  End Element Select'
           @ 5,53 SAY ' 59  Abandon Query'
*          SET COLOR TO 112, 6
           @ 5,51 SAY '!'
           @ 6,25 SAY '!'
           @ 6,51 SAY '!'
           @ 7,1 SAY '31   90 Region'
           @ 7,25 SAY '!   40  Deficiency Ver      !';
                    + '   49  Action Code'
           @ 8,1 SAY '32   Type Defect'
           @ 8,25 SAY '!   41  Deficiency Resp     !';
                    + '   50  Cost Code'
           @ 9,1 SAY '33   Vendor Liab Code'
           @ 9,25 SAY '!   42  New-Repair/Ovhl     !';
```

```
                    + '  51  Status Code'
          @ 10,1 SAY '34  Action Point'
          @ 10,25 SAY '!  43  Date Mfg/Ovhl'
          @ 10,51 SAY '!  52  Cause Code'
          @ 11,1 SAY '35  Screen Quantity'
          @ 11,25 SAY "!  44  Opn Time at Failure!";
                    + "  53  Action Dis'n"
          @ 12,1 SAY '36  Analyst Code'
          @ 12,25 SAY '!  45  GFM'
          @ 12,51 SAY '!  54  Part Number'
          @ 13,1 SAY '37  Quantity Inspected  !';
                + '  46  Work Unit Code      !  55'
          @ 13,58 SAY 'Lot/Ser/Batch'
          @ 14,1 SAY '38  Quantity Received   !';
                + '  47  Discovery Code      !  56'
          @ 14,58 SAY 'Def Item'
          @ 15,1 SAY '39  Quantity in Stock   !';
                + '  48  Return Code         !  57'
          @ 15,58 SAY 'Warranty'
          @ 16,1 SAY '58  End Element Select  !';
                + '  59  Abandon Query'
          @ 16,51 SAY '!  00  Prev Page of Elements'
          @ 17,0 SAY '-------------------------------------';
            + '--------------------------------------'
          @ 18,0 SAY 'Relations   a - Include    b - Exclude'
          @ 18,42 SAY 'c - Range    d - Equal'
          @ 19,10 SAY 'e - Not Equal        f - Less Than    ';
                + '  g - Greater Than'
          @ 21,27 SAY 'Enter Data Element Number ' GET ;
                    Q:SELECT PICTURE '99'
          READ
          DO WHILE Q:SELECT < '00' .OR. Q:SELECT > '59'
             @ 23,26 SAY 'Select From Above (00 - 59)'+CHR(7)
             @ 21,27 SAY 'Enter Data Element Number ' ;
                        GET Q:SELECT PICTURE '99'
             READ
          ENDDO
          @ 23,26 SAY '                              '
       ELSE

*****  Begin Case To Generate Formats For Entering Initial
*****  Values - Each Selected Item Has Its Name and Picture
*****  Stored in an Indirect Variable

          DO CASE

*****  If Termination Requested Release Local Memory and
*****  Return to Calling Routine

             CASE Q:SELECT = '59'
                RELEASE ALL LIKE Q:*
                RETURN

*****  Begin Generating Selection Code
*****  If a Character Field Set Character Flag
*****  Load The Picture for the Data Field
*****  Initialize the Data Field and Then Continue
*****  To Generate Code

             CASE Q:SELECT = '01'
               STORE 'CASE' TO Q:SELITEM
               STORE "'99999A'" TO Q:SELPIC
               STORE '      ' TO Q:INIT1
               STORE T TO Q:CHAR
               STORE 'Q:SELCMD1' TO Q:SELCMD
             CASE Q:SELECT = '02'
               STORE 'COG' TO Q:SELITEM
               STORE "'9A'" TO Q:SELPIC
               STORE T TO Q:CHAR
```

```
  STORE '  ' TO Q:INIT1
  STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '03'
  STORE 'NSN' TO Q:SELITEM
  STORE "'9999XXXX9999'" TO Q:SELPIC
  STORE T TO Q:CHAR
  STORE '             ' TO Q:INIT1
  STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '04'
  STORE 'CAT' TO Q:SELITEM
  STORE "'9'" TO Q:SELPIC
  STORE ' ' TO Q:INIT1
  STORE T TO Q:CHAR
  STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '05'
  STORE 'NOMEN' TO Q:SELITEM
  STORE "'XXXXXXXXXXXXXXXXXX'" TO Q:SELPIC
  STORE '                  ' TO Q:INIT1
  STORE T TO Q:CHAR
  STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '06'
  STORE 'UIC' TO Q:SELITEM
  STORE "'AXXXXX'" TO Q:SELPIC
  STORE '      ' TO Q:INIT1
  STORE T TO Q:CHAR
  STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '07'
  STORE 'UI' TO Q:SELITEM
  STORE "'AA'" TO Q:SELPIC
  STORE '  ' TO Q:INIT1
  STORE T TO Q:CHAR
  STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '08'
  STORE 'UPRC' TO Q:SELITEM
  STORE "'999999.99'" TO Q:SELPIC
  STORE 9 TO Q:NR
  STORE 2 TO Q:DEC
  STORE 0 TO Q:INIT1
  STORE F TO Q:CHAR
  STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '09'
  STORE 'QTYDEF' TO Q:SELITEM
  STORE "'999999'" TO Q:SELPIC
  STORE 6 TO Q:NR
  STORE 0 TO Q:DEC
  STORE 0 TO Q:INIT1
  STORE F TO Q:CHAR
  STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '10'
  STORE 'EPRC' TO Q:SELITEM
  STORE "'999999999.99'" TO Q:SELPIC
  STORE 12 TO Q:NR
  STORE 2 TO Q:DEC
  STORE 0 TO Q:INIT1
  STORE F TO Q:CHAR
  STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '11'
  STORE 'ORG' TO Q:SELITEM
  STORE "'XXX'" TO Q:SELPIC
  STORE '   ' TO Q:INIT1
  STORE T TO Q:CHAR
  STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '12  '
  STORE 'DOC' TO Q:SELITEM
  STORE "'9'" TO Q:SELPIC
  STORE ' ' TO Q:INIT1
  STORE T TO Q:CHAR
  STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '13'
```

```
      STORE '$(DATES,1,5)' TO Q:SELITEM
      STORE "'99999'" TO Q:SELPIC
      STORE '     ' TO Q:INIT1
      STORE T TO Q:CHAR
      STORE 'C:SELCMD1' TO Q:SELCMD
   CASE Q:SELECT = '14'
      STORE '$(DATES,6,5)' TO Q:SELITEM
      STORE "'99999'" TO Q:SELPIC
      STORE '     ' TO Q:INIT1
      STORE T TO Q:CHAR
      STORE 'C:SELCMD1' TO Q:SELCMD
   CASE Q:SELECT = '15'
      STORE '$(DATES,11,5)' TO Q:SELITEM
      STORE "'99999'" TO Q:SELPIC
      STORE '     ' TO Q:INIT1
      STORE T TO Q:CHAR
      STORE 'C:SELCMD1' TO Q:SELCMD
   CASE Q:SELECT = '16'
      STORE '$(DATES,16,5)' TO Q:SELITEM
      STORE "'99999'" TO Q:SELPIC
      STORE '     ' TO Q:INIT1
      STORE T TO Q:CHAR
      STORE 'C:SELCMD1' TO Q:SELCMD
   CASE Q:SELECT = '17'
      STORE '$(DATES,26,5)' TO Q:SELITEM
      STORE "'99999'" TO Q:SELPIC
      STORE '     ' TO Q:INIT1
      STORE T TO Q:CHAR
      STORE 'C:SELCMD1' TO Q:SELCMD
   CASE Q:SELECT = '18'
      STORE '$(DATES,36,5)' TO Q:SELITEM
      STORE "'99999'" TO Q:SELPIC
      STORE '     ' TO Q:INIT1
      STORE T TO Q:CHAR
      STORE 'C:SELCMD1' TO Q:SELCMD
   CASE Q:SELECT = '19'
      STORE '$(DATES,41,5)' TO Q:SELITEM
      STORE "'99999'" TO Q:SELPIC
      STORE '     ' TO Q:INIT1
      STORE T TO Q:CHAR
      STORE 'C:SELCMD1' TO Q:SELCMD
   CASE Q:SELECT = '20'
      STORE '$(DATES,21,5)' TO Q:SELITEM
      STORE "'99999'" TO Q:SELPIC
      STORE '     ' TO Q:INIT1
      STORE T TO Q:CHAR
      STORE 'C:SELCMD1' TO Q:SELCMD
   CASE Q:SELECT = '21'
      STORE '$(DATES,31,5)' TO Q:SELITEM
      STORE "'99999'" TO Q:SELPIC
      STORE '     ' TO Q:INIT1
      STORE T TO Q:CHAR
      STORE 'C:SELCMD1' TO Q:SELCMD
   CASE Q:SELECT = '22'
      STORE '$(DATES,46,5)' TO Q:SELITEM
      STORE "'99999'" TO Q:SELPIC
      STORE '     ' TO Q:INIT1
      STORE T TO Q:CHAR
      STORE 'C:SELCMD1' TO Q:SELCMD
   CASE Q:SELECT = '23'
      STORE 'DOCNO' TO Q:SELITEM
      STORE "'XXXXXX99999999'" TO Q:SELPIC
      STORE '              ' TO Q:INIT1
      STORE T TO Q:CHAR
      STORE 'C:SELCMD1' TO Q:SELCMD
   CASE Q:SELECT = '24'
      STORE 'REPCON' TO Q:SELITEM
      STORE "'XXXXXX999999'" TO Q:SELPIC
      STORE '            ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '25'
   STORE 'FSCM' TO Q:SELITEM
   STORE "'XXXXXX'" TO Q:SELPIC
   STORE '      ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '26'
   STORE 'NUM' TO Q:SELITEM
   STORE "'XXXXXX99AXXXXXXXX'" TO Q:SELPIC
   STORE '                 ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '27'
   STORE 'CR' TO Q:SELITEM
   STORE "'A'" TO Q:SELPIC
   STORE ' ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '28'
   STORE 'SCR' TO Q:SELITEM
   STORE "'XXX'" TO Q:SELPIC
   STORE '   ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '29'
   STORE 'SM' TO Q:SELITEM
   STORE "'AX'" TO Q:SELPIC
   STORE '  ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '31'
   STORE 'C9Q' TO Q:SELITEM
   STORE "'X'" TO Q:SELPIC
   STORE ' ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '32'
   STORE 'DEF' TO Q:SELITEM
   STORE "'99'" TO Q:SELPIC
   STORE '  ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '33'
   STORE 'VLC' TO Q:SELITEM
   STORE "'A'" TO Q:SELPIC
   STORE ' ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '34'
   STORE 'ACTPT' TO Q:SELITEM
   STORE "'AXXXXX99999'" TO Q:SELPIC
   STORE '           ' TO Q:INIT1
   STORE T TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '35'
   STORE 'SCRQTY' TO Q:SELITEM
   STORE "'999999'" TO Q:SELPIC
   STORE 6 TO Q:NR
   STORE 0 TO Q:DEC
   STORE 0 TO Q:INIT1
   STORE F TO Q:CHAR
   STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '36'
   STORE 'WHO' TO Q:SELITEM
   STORE "'XXXX'" TO Q:SELPIC
   STORE '    ' TO Q:INIT1
   STORE T TO Q:CHAR
```

```
  STORE 'Q:SELCMD1' TO Q:SELCMD
CASE Q:SELECT = '37'
  STORE 'CTYINS' TO Q:SELITEM
  STORE "'999999'" TO Q:SELPIC
  STORE 6 TO Q:NR
  STORE 0 TO Q:DEC
  STORE 0 TO Q:INIT1
  STORE F TO Q:CHAR
  STORE 6 TO Q:NR
  STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '38'
  STORE 'CTYREC' TO Q:SELITEM
  STORE "'999999'" TO Q:SELPIC
  STORE 6 TO Q:NR
  STORE 0 TO Q:DEC
  STORE 0 TO Q:INIT1
  STORE F TO Q:CHAR
  STORE 6 TO Q:NR
  STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '39'
  STORE 'CTYSTK' TO Q:SELITEM
  STORE "'999999'" TO Q:SELPIC
  STORE 6 TO Q:NR
  STORE 0 TO Q:DEC
  STORE 0 TO Q:INIT1
  STORE F TO Q:CHAR
  STORE 6 TO Q:NR
  STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '40'
  STORE 'DEFV' TO Q:SELITEM
  STORE "'A'" TO Q:SELPIC
  STORE " " TO Q:INIT1
  STORE T TO Q:CHAR
  STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '41'
  STORE 'DEFR' TO Q:SELITEM
  STORE "'A'" TO Q:SELPIC
  STORE " " TO Q:INIT1
  STORE T TO Q:CHAR
  STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '42'
  STORE 'ITEM' TO Q:SELITEM
  STORE "'A'" TO Q:SELPIC
  STORE " " TO Q:INIT1
  STORE T TO Q:CHAR
  STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '43'
  STORE 'CVER' TO Q:SELITEM
  STORE "'99999'" TO Q:SELPIC
  STORE "     " TO Q:INIT1
  STORE T TO Q:CHAR
  STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '44'
  STORE 'CTF' TO Q:SELITEM
  STORE "'A9999'" TO Q:SELPIC
  STORE "     " TO Q:INIT1
  STORE T TO Q:CHAR
  STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '45'
  STORE 'GOV' TO Q:SELITEM
  STORE "'X'" TO Q:SELPIC
  STORE " " TO Q:INIT1
  STORE T TO Q:CHAR
  STORE 'Q:SELCMD2' TO Q:SELCMD
CASE Q:SELECT = '46'
  STORE 'WUC' TO Q:SELITEM
  STORE "'XXXXXXX'" TO Q:SELPIC
  STORE "       " TO Q:INIT1
  STORE T TO Q:CHAR
```

```
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '47'
            STORE 'DIS' TO Q:SELITEM
            STORE "'AA'" TO Q:SELPIC
            STORE "  " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '48'
            STORE 'RETC' TO Q:SELITEM
            STORE "'9'" TO Q:SELPIC
            STORE " " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '49'
            STORE 'ACTTKN' TO Q:SELITEM
            STORE "'AAA'" TO Q:SELPIC
            STORE "   " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '50'
            STORE 'COSTC' TO Q:SELITEM
            STORE "'A'" TO Q:SELPIC
            STORE " " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '51'
            STORE 'STATUSC' TO Q:SELITEM
            STORE "'AA'" TO Q:SELPIC
            STORE "  " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '52'
            STORE 'CAUSEC' TO Q:SELITEM
            STORE "'A'" TO Q:SELPIC
            STORE " " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '53'
            STORE 'ACTDISP' TO Q:SELITEM
            STORE "'A'" TO Q:SELPIC
            STORE " " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '54'
            STORE 'MFG' TO Q:SELITEM
            STORE "'XXXXXXXXXXXXXXXX'" TO Q:SELPIC
            STORE "                 " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '55'
            STORE 'LOT' TO Q:SELITEM
            STORE "'XXXXXXXXX'" TO Q:SELPIC
            STORE "          " TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
         CASE Q:SELECT = '56'
            STORE 'DITEM' TO Q:SELITEM
            STORE "'XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX'";
                TO Q:SELPIC
            STORE "                                        ";
                TO Q:INIT1
            STORE T TO Q:CHAR
            STORE 'Q:SELCMD2' TO Q:SELCMD
      ENDCASE

*****  Display Selection Relations and Accept Relationship
*****  and Initial Search Values

   IF Q:SELECT<>'00' .AND. Q:SELECT<>'30' .AND.;
```

```
          Q:SELECT<>'58'
          STORE Q:ITEM + 1 TO Q:ITEM
          ERASE
          STORE ' ' TO Q:SELECT
          @ 06,0 SAY 'Relations   a - Include    b - Exclude'
          @ 06,42 SAY 'c - Range    d - Equal'
          @ 07,10 SAY 'e - Not Equal         f - Less Than      ';
                 + '  g - Greater Than'
          @ 10,10 SAY 'Enter Relationship for Selection ' GET ;
                      Q:SELECT PICTURE 'A'
          READ

*****     Validate Entered Value

          DO WHILE !(Q:SELECT) < 'A' .OR. !(Q:SELECT) > 'G'
             @ 23,18 SAY 'Enter Relationship as Displayed ';
                      + 'Above (A - G)' + CHR(7)
             @ 10,10 SAY 'Enter Relationship for Selection ';
                         GET Q:SELECT PICT 'A'
             READ
          ENDDO
          @ 23,18 SAY '                                         ';
                 + '        '

*****     If Range Selected, Accept Two Initial Values

          IF !(Q:SELECT) = 'C'
             STORE Q:INIT1 TO Q:INIT2
             @ 14,10 SAY 'Enter MINIMUM Value Allowed ' ;
                         GET Q:INIT1 PICT &Q:SELPIC
             READ
             @ 16,10 SAY 'Enter MAXIMUM Value Allowed ' ;
                         GET Q:INIT2 PICT &Q:SELPIC
             READ

*****     Ensure That Values are Properly Ordered

             IF Q:INIT1 > Q:INIT2
                STORE Q:INIT1 TO Q:TEMP
                STORE Q:INIT2 TO Q:INIT1
                STORE Q:TEMP TO Q:INIT2
                RELEASE Q:TEMP
             ENDIF

*****     If Character Field, Place Quotes Around Initial
*****     Value(s)

             IF Q:CHAR
                STORE "'"+!(Q:INIT1)+"'" TO Q:INIT1
                STORE "'"+!(Q:INIT2)+"'" TO Q:INIT2
             ELSE

*****     Format Numerics to be Characters For Code Generation

                STORE STR(Q:INIT1,Q:NR,Q:DEC) TO Q:INIT1T
                STORE Q:INIT1T TO Q:INIT1
                STORE STR(Q:INIT2,Q:NR,Q:DEC) TO Q:INIT2T
                STORE Q:INIT2T TO Q:INIT2
                RELEASE Q:INIT1T, Q:INIT2T
             ENDIF

*****     Form Partial Command Line

             IF &Q:SELCMD = ' '
                STORE Q:SELITEM+'>'+Q:INIT1+'.AND.'+Q:SELITEM+;
                                 '<'+Q:INIT2 TO &Q:SELCMD
             ELSE
                STORE &Q:SELCMD+'.AND.'+Q:SELITEM+'>'+Q:INIT1;
                   +'.AND.'+Q:SELITEM+'<'+Q:INIT2 TO &Q:SELCMD
```

```
        ENDIF
     ELSE

*****  Accept Selection Values For Query (Single Value)

       @ 12,10 SAY 'Enter Value for Selection ' GET;
             Q:INIT1 PICT &Q:SELPIC
        READ

*****  If Character, Place Quotes Around Initial Value

        IF Q:CHAR
          STORE "'"+!(Q:INIT1)+"'" TO Q:INIT1
        ELSE

*****  Format Numerics to be Characters For Code Generation

          STORE STR(Q:INIT1,Q:NR,Q:DEC) TO Q:INIT1T
          STORE Q:INIT1T TO Q:INIT1
          RELEASE Q:INIT1T
        ENDIF

*****  Form Partial Command Line
*****  Command Line Formation Uses Indirect Addressing to
*****  Point to the Location Of the Command Line

*****  If A Previous Line Has Been Created, Join Together
*****  With an AND

        IF &Q:SELCMD <> ' '
           STORE &Q:SELCMD+'.AND.' TO &Q:SELCMD
        ENDIF
        DO CASE
          CASE !(Q:SELECT) = 'A'
             STORE &Q:SELCMD-Q:SELITEM+'='+Q:INIT1 TO &Q:SELCMD
          CASE !(Q:SELECT) = 'B'
             STORE &Q:SELCMD-Q:SELITEM+'<>'+Q:INIT1 TO &Q:SELCMD
          CASE !(Q:SELECT) = 'D'
             STORE &Q:SELCMD-Q:SELITEM+'='+Q:INIT1 TO &Q:SELCMD
          CASE !(Q:SELECT) = 'E'
             STORE &Q:SELCMD-Q:SELITEM+'<>'+Q:INIT1 TO &Q:SELCMD
          CASE !(Q:SELECT) = 'F'
             STORE &Q:SELCMD-Q:SELITEM+'<'+Q:INIT1 TO &Q:SELCMD
          CASE !(Q:SELECT) = 'G'
             STORE &Q:SELCMD-Q:SELITEM+'>'+Q:INIT1 TO &Q:SELCMD
        ENDCASE
     ENDIF
     STORE '00' TO Q:SELECT
   ENDIF
     ENDIF
   ENDIF
ENDDO
*SET COLOR TO 112, 3
RELEASE Q:SELITEM, Q:SELPIC, Q:CHAR, Q:INIT1, Q:INIT2, Q:NR
STORE F TO Q:DATESEL
STORE 'CASE ' TO Q:FLDCMD1
STORE 'CASE ' TO Q:FLDCMD2
STORE ' ' TO Q:FIELD
STORE 0 TO Q:ITEM
STORE '00' TO Q:SELECT
STORE ' ' TO Q:CHOSEN

*****  Display Selection Menu to Allow Selection of Items
*****  To Be Displayed - Displays First Screen

DO WHILE Q:ITEM <= 9 .AND. Q:SELECT <> '58'
   IF Q:SELECT = '00'
     ERASE
     @ 2,21 SAY 'Enter Field Selection For This Query'
```

```
          @ 3,19 SAY '(A Maximum of 10 Fields May Be Selected)'
          @ 4,0 SAY '----------------------------------------';
                 + '----------------------------------------'
          @ 5,0 SAY 'Data Elements'
          @ 5,25 SAY '!'
*         SET COLOR TO 112,2
          @ 5,27 SAY ' 58  End Element Select'
          @ 5,53 SAY ' 59  Abandon Query'
*         SET COLOR TO 112, 3
          @ 5,51 SAY '!'
          @ 6,25 SAY '!'
          @ 6,51 SAY '!'
          @ 7,1 SAY '01  Case Number'
          @ 7,25 SAY '!  11  Origin Code'
          @ 7,51 SAY '!  21  Interim Repor'
          @ 7,71 SAY 't Date'
          @ 8,1 SAY '02  Cog'
          @ 8,25 SAY '!  12  Type Document'
          @ 8,51 SAY '!  22  Origin Prep Date'
          @ 9,1 SAY '03  NSN'
          @ 9,25 SAY '!  13  Discovery Date      !';
                   + '  23  Document Number'
          @ 10,1 SAY '04  Category'
          @ 10,25 SAY '!  14  Date Received'
          @ 10,51 SAY '!  24  Report Contro'
          @ 10,71 SAY 'l Number'
          @ 11,1 SAY '05  Nomenclature'
          @ 11,25 SAY '!  15  Open Date'
          @ 11,51 SAY '!  25  FSCM'
          @ 12,1 SAY '06  UIC of Origin'
          @ 12,25 SAY '!  16  Transmittal Date    !';
                    + '  26  Contract Number'
          @ 13,1 SAY '07  Unit of Issue'
          @ 13,25 SAY '!  17  IM Response Date    !';
                    + '  27  Credit Code'
          @ 14,1 SAY '08  Unit Price'
          @ 14,25 SAY '!  18  Close Date'
          @ 14,51 SAY '!  28  Screening Code'
          @ 15,1 SAY '09  Quantity Deficient  !';
                 + '  19  Reopen Date        !  29  SMIC'
          @ 16,1 SAY '10  Extended Price'
          @ 16,25 SAY '!  20  Screen Report'
          @ 16,46 SAY 'Date !  30  Next Page of Elements'
          @ 17,0 SAY '----------------------------------------';
                 + '----------------------------------------'

*****  Display Previously Selected Fields

          @ 19,0 SAY 'Fields Currently Selected '+ Q:CHOSEN
          @ 21,27 SAY 'Enter Field Number ' GET Q:SELECT PICTURE '99'
          READ

*****  Validate Field Selection

          DO WHILE Q:SELECT < '00' .OR. Q:SELECT > '59'
             @ 23,26 SAY 'Select From Above (00 - 59)'+CHR(7)
             @ 21,27 SAY 'Enter Field Number ' GET ;
                         Q:SELECT PICTURE '99'
             READ
          ENDDO
          @ 23,26 SAY '                              '
       ELSE

*****  Display Second Screen For Selection

          IF Q:SELECT = '30'
             ERASE
             @ 2,21  SAY 'Enter Field Selection For This Query'
             @ 3,19  SAY '(A Maximum of 10 Fields May Be Selected)'
```

```
            @ 4,0 SAY '--------------------------------------';
              + '--------------------------------------'
            @ 5,0 SAY 'Data Elements'
            @ 5,25 SAY '!'
*           SET COLCR TO 112,2
            @ 5,27 SAY ' 58  End Element Select'
            @ 5,53 SAY ' 59  Abandon Query'
*           SET COLCR TO 112, 3
            @ 5,51 SAY '!'
            @ 6,25 SAY '!'
            @ 6,51 SAY '!'
            @ 7,1 SAY '31   90 Region'
            @ 7,25 SAY '!   40  Deficiency Ver      !';
                     + '    49  Action Code'
            @ 8,1 SAY '32   Type Defect'
            @ 8,25 SAY '!   41  Deficiency Resp     !';
                     + '    50  Cost Code'
            @ 9,1 SAY '33   Vendor Liab Code'
            @ 9,25 SAY '!   42  New-Repair/Ovhl     !';
                     + '    51  Status Code'
            @ 10,1 SAY '34   Action Point'
            @ 10,25 SAY '!   43  Date Mfg/Ovhl'
            @ 10,51 SAY '!   52  Cause Code'
            @ 11,1 SAY '35   Screen Quantity'
            @ 11,25 SAY "!   44  Opn Time at Failure!";
                      + "    53  Action Dis'n"
            @ 12,1 SAY '36   Analyst Code'
            @ 12,25 SAY '!   45  GFM'
            @ 12,51 SAY '!   54  Part Number'
            @ 13,1 SAY '37   Quantity Inspected  !';
                 + '   46  Work Unit Code      !  55'
            @ 13,58 SAY 'Lot/Ser/Batch'
            @ 14,1 SAY '38   Quantity Received   ! ';
                 + '  47  Discovery Code      !  56'
            @ 14,58 SAY 'Def Item'
            @ 15,1 SAY '39   Quantity in Stock   !  ';
                 + '48   Return Code         !  57'
            @ 15,58 SAY 'Warranty'
            @ 16,1 SAY '58   End Element Select  !';
                 + '   59   Abandon Query'
            @ 16,51 SAY '!   00  Prev Page of Elements'
            @ 17,0 SAY '--------------------------------------';
              + '--------------------------------------'
            @ 19,0 SAY 'Fields Currently Selected '+ Q:CHOSEN
            @ 21,27 SAY 'Enter Field Number ' GET ;
                      Q:SELECT PICTURE '99'
            READ

*****    Validate Field Selection

            DO WHILE Q:SELECT < '00' .OR. Q:SELECT > '59'
               @ 23,26 SAY 'Select From Above (00 - 59)'+CHR(7)
               @ 21,27 SAY 'Enter Field Number ' GET ;
                         Q:SELECT PICTURE '99'
               READ
            ENDDO
            @ 23,26 SAY '                               '
         ELSE

*****    Begin Creating Code For Fields Selected

            DO CASE

*****    If 59 Entered, Release All Local Memory and Return

               CASE Q:SELECT = '59'
                  RELEASE ALL LIKE Q:*
                  RETURN
```

```
*****   Store Selection Name to Q:SELITEM
*****   Store Field Selection Pointer To Q:FLDCMD

          CASE Q:SELECT = '01'
             STORE 'CASE' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '02'
             STORE 'COG' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '03'
             STORE 'NSN' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '04'
             STORE 'CAT' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '05'
             STORE 'NOMEN' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '06'
             STORE 'UIC' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '07'
             STORE 'UI' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '08'
             STORE 'UPRC' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '09'
             STORE 'QTYDEF' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '10'
             STORE 'EPRC' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '11'
             STORE 'CRG' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '12'
             STORE 'DOC' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '13'
             STORE '$(DATES, 1,5)' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '14'
             STORE '$(DATES, 6,5)' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '15'
             STORE '$(DATES,11,5)' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '16'
             STORE '$(DATES,16,5)' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '17'
             STORE '$(DATES,26,5)' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '18'
             STORE '$(DATES,36,5)' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '19'
             STORE '$(DATES,41,5)' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '20'
             STORE '$(DATES,21,5)' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '21'
             STORE '$(DATES,31,5)' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
          CASE Q:SELECT = '22'
             STORE '$(DATES,46,5)' TO Q:SELITEM
             STORE 'Q:FLDCMD1' TO Q:FLDCMD
```

```
CASE Q:SELECT = '23'
  STORE 'DOCNO' TO Q:SELITEM
  STORE 'Q:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '24'
  STORE 'REPCON' TO Q:SELITEM
  STORE 'Q:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '25'
  STORE 'FSCM' TO Q:SELITEM
  STORE 'Q:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '26'
  STORE 'NUM' TO Q:SELITEM
  STORE 'Q:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '27'
  STORE 'CR' TO Q:SELITEM
  STORE 'Q:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '28'
  STORE 'SCR' TO Q:SELITEM
  STORE 'Q:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '29'
  STORE 'SM' TO Q:SELITEM
  STORE 'Q:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '31'
  STORE 'C9Q' TO Q:SELITEM
  STORE 'Q:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '32'
  STORE 'DEF' TO Q:SELITEM
  STORE 'Q:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '33'
  STORE 'VLC' TO Q:SELITEM
  STORE 'Q:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '34'
  STORE 'ACTPT' TO Q:SELITEM
  STORE 'Q:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '35'
  STORE 'SCRQTY' TO Q:SELITEM
  STORE 'Q:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '36'
  STORE 'WHO' TO Q:SELITEM
  STORE 'Q:FLDCMD1' TO Q:FLDCMD
CASE Q:SELECT = '37'
  STORE 'QTYINS' TO Q:SELITEM
  STORE 'Q:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '38'
  STORE 'QTYREC' TO Q:SELITEM
  STORE 'Q:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '39'
  STORE 'QTYSTK' TO Q:SELITEM
  STORE 'Q:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '40'
  STORE 'DEFV' TO Q:SELITEM
  STORE 'Q:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '41'
  STORE 'DEFR' TO Q:SELITEM
  STORE 'Q:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '42'
  STORE 'ITEM' TO Q:SELITEM
  STORE 'Q:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '43'
  STORE 'CVER' TO Q:SELITEM
  STORE 'Q:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '44'
  STORE 'OTF' TO Q:SELITEM
  STORE 'Q:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '45'
  STORE 'GOV' TO Q:SELITEM
  STORE 'Q:FLDCMD2' TO Q:FLDCMD
CASE Q:SELECT = '46'
  STORE 'WUC' TO Q:SELITEM
  STORE 'Q:FLDCMD2' TO Q:FLDCMD
```

```
            CASE Q:SELECT = '47'
              STORE 'DIS' TO Q:SELITEM
              STORE 'Q:FLDCMD2' TO Q:FLDCMD
            CASE Q:SELECT = '48'
              STORE 'RETC' TO Q:SELITEM
              STORE 'Q:FLDCMD2' TO Q:FLDCMD
            CASE Q:SELECT = '49'
              STORE 'ACTTKN' TO Q:SELITEM
              STORE 'Q:FLDCMD2' TO Q:FLDCMD
            CASE Q:SELECT = '50'
              STORE 'COSTC' TO Q:SELITEM
              STORE 'Q:FLDCMD2' TO Q:FLDCMD
            CASE Q:SELECT = '51'
              STORE 'STATUSC' TO Q:SELITEM
              STORE 'Q:FLDCMD2' TO Q:FLDCMD
            CASE Q:SELECT = '52'
              STORE 'CAUSEC' TO Q:SELITEM
              STORE 'Q:FLDCMD2' TO Q:FLDCMD
            CASE Q:SELECT = '53'
              STORE 'ACTDISP' TO Q:SELITEM
              STORE 'Q:FLDCMD2' TO Q:FLDCMD
            CASE Q:SELECT = '54'
              STORE 'MFG' TO Q:SELITEM
              STORE 'Q:FLDCMD2' TO Q:FLDCMD
            CASE Q:SELECT = '55'
              STORE 'LOT' TO Q:SELITEM
              STORE 'Q:FLDCMD2' TO Q:FLDCMD
            CASE Q:SELECT = '56'
              STORE 'DITEM' TO Q:SELITEM
              STORE 'Q:FLDCMD2' TO Q:FLDCMD
            CASE Q:SELECT = '57'
              STORE 'WNTY' TO Q:SELITEM
              STORE 'Q:FLDCMD2' TO Q:FLDCMD
         ENDCASE
         IF Q:SELECT <> '00' .AND. Q:SELECT <> '30' .AND.;
                Q:SELECT <> '58'
            STORE Q:ITEM + 1 TO Q:ITEM
            IF Q:ITEM = 1
               STORE Q:SELECT TO Q:CHOSEN
               STORE Q:SELITEM TO Q:DISPLAY
            ELSE
               STORE Q:CHOSEN+', '+Q:SELECT TO Q:CHOSEN
               STORE Q:DISPLAY+', '+Q:SELITEM TO Q:DISPLAY
            ENDIF
            IF Q:SELECT <> '01'
               IF $(Q:SELITEM,1,1)='$' .AND. .NOT. Q:DATESEL
                  STORE 'DATES' TO Q:SELITEM
                  STORE &Q:FLDCMD-','+Q:SELITEM TO &Q:FLDCMD
                  STORE ' ' TO Q:SELITEM
                  STORE T TO Q:DATESEL
               ELSE
                  IF $(Q:SELITEM,1,1)<>'$'
                     STORE &Q:FLDCMD-','+Q:SELITEM TO &Q:FLDCMD
                  ENDIF
               ENDIF
            ENDIF

*****  Generate Code For Field Selection
            IF Q:FIELD = ' '
               STORE Q:FIELD-Q:SELITEM TO Q:FIELD
            ELSE
               STORE Q:FIELD-','-Q:SELITEM TO Q:FIELD
            ENDIF
            STORE '00' TO Q:SELECT
         ENDIF
      ENDIF
   ENDIF
ENDDO
```

```
*****  Release All Unnecessary Memory Variables

RELEASE Q:REPLY, Q:SELECT, Q:ITEM, Q:SELITEM, Q:SELCMD,;
         Q:FLDCMD, Q:CHOSEN

STORE Q:NRPASSES TO Q:LOOPCNT

*****  If Both OPEN and CLOSED Files are Selected
*****  The Execution Loop Will Be Run Twice

DO WHILE Q:LOOPCNT >= 1

*****  Select File To Be Used In This Query

IF Q:FILE = 'O'
   STORE 'D:'+C:WHO-'OPEN' TO Q:TEMP3
ELSE
   STORE 'D:'+C:WHO-'CLOS' TO Q:TEMP3
ENDIF

*****  Generate Executable Code To Perform Query Selection
*****  Check to See If The Selection Deals With The First
*****  Half of the Data Base

IF Q:SELCMD1 <> ' '
   IF Q:FILE = 'O'
      STORE 'USE D:OPEN1'TO &Q:LINE
      STORE Q:CNTR + 1 TO Q:CNTR
      STORE 'Q:L' + STR(Q:CNTR,2) TO Q:LINE
   ELSE
      STORE 'USE D:CLOSE1'TO &Q:LINE
      STORE Q:CNTR + 1 TO Q:CNTR
      STORE 'Q:L' + STR(Q:CNTR,2) TO Q:LINE
   ENDIF
   STORE 'D:'+C:WHO+'TMP1' TO Q:TEMP1
   STORE 'COPY TO '+C:TEMP1 TO &Q:LINE
   IF Q:FLDCMD1 <> 'CASE '
      STORE &Q:LINE+' FIELD '+Q:FLDCMD1+' FOR '+Q:SELCMD1;
             TO &Q:LINE
   ELSE
      STORE &Q:LINE+' FOR '+Q:SELCMD1 TO &Q:LINE
   ENDIF
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
ENDIF
*****  Generate Executable Code To Perform Query Selection
*****  Check to See If The Selection Deals With The Second
*****  Half of the Data Base

IF Q:SELCMD2 <> ' '
   IF Q:FILE = 'O'
      STORE 'USE D:OPEN2' TO &Q:LINE
      STORE Q:CNTR + 1 TO Q:CNTR
      STORE 'Q:L' + STR(Q:CNTR,2) TO Q:LINE
   ELSE
      STORE 'USE D:CLOSE2' TO &Q:LINE
      STORE Q:CNTR + 1 TO Q:CNTR
      STORE 'Q:L' + STR(Q:CNTR,2) TO Q:LINE
   ENDIF
   STORE 'D:'+C:WHO+'TMP2' TO Q:TEMP2
   STORE 'COPY TO '+C:TEMP2 TO &Q:LINE
   IF Q:FLDCMD2 <> 'CASE '
      STORE &Q:LINE+' FIELD '+Q:FLDCMD2+' FOR '+Q:SELCMD2;
            TO &Q:LINE
   ELSE
      STORE &Q:LINE+' FOR '+Q:SELCMD2 TO &Q:LINE
   ENDIF
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
```

```
ENDIF

*****  Generate Code to Join Together Both Halves of the
*****  Selected Files

IF Q:SELCMD1 <> ' ' .AND. Q:SELCMD2 <> ' '
   STORE 'SELECT PRIMARY' TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
   STORE 'USE '+Q:TEMP1 TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
   STORE 'SELECT SECONDARY' TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
   STORE 'USE '+Q:TEMP2 TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
   STORE 'JOIN TO '+Q:TEMP3+' FOR P.CASE=S.CASE FIELD '+;
          Q:FIELD TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
   STORE 'USE' TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
   STORE 'DELETE FILE D:'+Q:TEMP1-'.DBF' TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
   STORE 'DELETE FILE D:'+Q:TEMP2-'.DBF' TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
ELSE
   IF Q:SELCMD1 <> ' ' .AND. Q:SELCMD2 = ' '

*****  Generate Codes to Rename Files as Necessary
      IF Q:FLDCMD2 = 'CASE '
         STORE 'RENAME '+Q:TEMP1-'.DBF TO '+Q:TEMP3-'.DBF';
               TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
      ELSE
         STORE 'SELECT SECONDARY' TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         STORE 'USE '+Q:TEMP1 TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         STORE 'SELECT PRIMARY' TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         IF Q:FILE = 'O'
            STORE 'USE D:OPEN2' TO &Q:LINE
            STORE Q:CNTR + 1 TO Q:CNTR
            STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         ELSE
            STORE 'USE D:CLOSE2' TO &Q:LINE
            STORE Q:CNTR + 1 TO Q:CNTR
            STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         ENDIF
         STORE 'JOIN TO '+Q:TEMP3+;
            ' FOR P.CASE=S.CASE FIELD '+Q:FIELD TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         STORE 'USE' TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         STORE 'DELETE FILE D:'+Q:TEMP1-'.DBF' TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
      ENDIF
   ELSE
      IF Q:FLDCMD1 = 'CASE '
         STORE 'RENAME '+Q:TEMP2-'.DBF TO '+Q:TEMP3-'.DIF';
             TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
      ELSE
         STORE 'SELECT SECONDARY' TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         STORE 'USE '+Q:TEMP2 TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         STORE 'SELECT PRIMARY' TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         IF Q:FILE = 'O'
            STORE 'USE D:OPEN1' TO &Q:LINE
            STORE Q:CNTR + 1 TO Q:CNTR
            STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         ELSE
            STORE 'USE D:CLOSE1' TO &Q:LINE
            STORE Q:CNTR + 1 TO Q:CNTR
            STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         ENDIF
         STORE 'JOIN TO '+Q:TEMP3+' FOR P.CASE=S.CASE '
                +'FIELD '+Q:FIELD TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         STORE 'USE' TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
         STORE 'DELETE FILE D:'+Q:TEMP2-'.DBF' TO &Q:LINE
         STORE Q:CNTR + 1 TO Q:CNTR
         STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
      ENDIF
   ENDIF
ENDIF
STORE Q:LOOPCNT-1 TO Q:LOOPCNT

*****  If Two Passes Required, Switch to Closed File
*****  For Second Pass
IF Q:NRPASSES = 2
   STORE 'C' TO Q:FILE
ENDIF
ENDDO

*****  If Two Passes Required, Generate Code To Join Files
*****  Created by Individual Passes

IF Q:NRPASSES = 2
   STORE 'USE D:'+C:WHO+'OPEN' TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
   STORE 'APPEND FROM '+"D:"+C:WHO+'CLOS' TO &Q:LINE
   STORE Q:CNTR + 1 TO Q:CNTR
   STORE 'Q:L'+STR(Q:CNTR,2) TO Q:LINE
ENDIF
*SET COLOR TO 112, 6
ERASE
@ 10,23 SAY 'Your Query Is Now Being Processed'
@ 12,33 SAY 'Please Standby'

*****  Begin Execution of Generated Code

STORE 10 TO Q:EXECNTR
DO WHILE Q:EXECNTR <= Q:CNTR-1
   STORE 'Q:L'+STR(Q:EXECNTR,2) TO Q:EXELINE
   &&Q:EXELINE
   STORE Q:EXECNTR + 1 TO Q:EXECNTR
ENDDO
STORE "'"+'D:'+C:WHO+'OPEN.DBF'+"'" TO Q:OPENFILE
STORE "'"+'D:'+C:WHO+'CLOS.DBF'+"'" TO Q:CLOSFILE
IF FILE(&Q:OPENFILE) .AND. FILE(&Q:CLOSFILE)
   STORE 'D:'+C:WHO+'OPEN' TO Q:USEFILE
   STORE 'D:'+C:WHO+'CLOS.DBF' TO Q:DELETEF
   DELETE FILE &Q:DELETEF
ELSE
   IF FILE(&Q:OPENFILE)
      STORE 'D:'+C:WHO+'OPEN' TO Q:USEFILE
   ELSE
      STORE 'D:'+C:WHO+'CLOS' TO Q:USEFILE
   ENDIF
ENDIF

*****  Display The Number of Records Selected and
*****  Provide the Option of Hard Copy or Screen Reports

USE &Q:USEFILE
GOTO BOTTOM
ERASE
@ 10,16 SAY #
@ 10,22 SAY 'Records Have Been Selected For This Query'
@ 13,30 SAY '1. Print Hard Copy'
@ 15,30 SAY '2. Display To Screen'
@ 17,30 SAY '3. Abort Query'
STORE ' ' TO Q:REPLY
@ 20,40 GET Q:REPLY
READ
DO WHILE Q:REPLY < '1' .OR. Q:REPLY > '3'
   @ 23,33 SAY 'Enter 1, 2 or 3'+ CHR(7)
   @ 20,40 GET Q:REPLY
   READ
ENDDO
DO CASE
   CASE Q:REPLY = '1'
      SET PRINT ON
      USE &Q:USEFILE
      DO WHILE .NOT. EOF
         ERASE
         STORE 0 TO Q:LINENR
         DO WHILE .NOT. EOF .AND. Q:LINENR <= 59
            DISPLAY ALL FIELD &Q:DISPLAY OFF
            SKIP
            STORE Q:LINENR + 1 TO Q:LINENR
         ENDDO
         ? CHR(12)
      ENDDO
      SET PRINT OFF
   CASE Q:REPLY = '2'
      ERASE
      USE &Q:USEFILE
      DISPLAY ALL FIELD &Q:DISPLAY OFF
      WAIT
   CASE Q:REPLY = '3'
      USE
      DELETE FILE &Q:USEFILE+'.DBF'
      RELEASE ALL LIKE Q:*
      RETURN
ENDCASE
USE
STORE Q:USEFILE+'.DBF' TO Q:USEFILE
DELETE FILE &Q:USEFILE
RELEASE ALL LIKE Q:*
RETURN

***** END OF PROGRAM
```

XIII. STATISTICS GENERATION MODULE

```
************************************************************
**                                                        **
**   Date: 19 Jan 1984                                    **
**   Version: 1.0                                         **
**   Module Name: STATGEN                                 **
**   Module Purpose: Generate Count of Cases in Each      **
**                   Processing Phase and Create Time     **
**                   Frame Statistics                     **
**                                                        **
**   Module Interface Definition                          **
**      Inputs: None                                      **
**      Outputs: None                                     **
**   Module Processing Narrative Description:             **
**                                                        **
**         Calculates the Time Span Between Operations    **
**         and Updates The TECHCODE File to Indicate the  **
**         Number of Cases in Each Processing Status      **
**                                                        **
**   Superordinate Modules: UTILMENU                      **
**   Subordinate Modules: None                            **
**   Author: R. G. NICHOLS                                **
**                                                        **
************************************************************

*****  Display Warning

ERASE
@  1,19 SAY '*****  Statistics Generation Processing *****'
@  3,24 SAY '* * * * * * * * * * * * * * * * *  '
@  4,24 SAY '*                               *  '
@  5,24 SAY '*            WARNING            *  '
@  6,24 SAY '*                               *  '
@  7,24 SAY '*     This Program Will Read    *  '
@  8,24 SAY '*        All Records While      *  '
@  9,24 SAY '*           Processing          *  '
@ 10,24 SAY '*                               *  '
@ 11,24 SAY '*      If Existing Files Are    *  '
@ 12,24 SAY '*      Large, This Could Take   *  '
@ 13,24 SAY '*            Hours              *  '
@ 14,24 SAY '*                               *  '
@ 15,24 SAY '* * * * * * * * * * * * * * * * *  '
@ 17,24 SAY '     Are You SURE You Want To'
@ 18,24 SAY '             Continue'
@ 19,24 SAY '         <Enter Y or N>' + CHR(7)
STORE ' ' TO S:REPLY2
@ 21,40 GET S:REPLY2
READ
DO WHILE !(S:REPLY2) <> 'Y' .AND. !(S:REPLY2) <> 'N'
   @ 23,32 SAY 'Enter Y or N Only' + CHR(7)
   @ 21,40 GET S:REPLY2 PICTURE 'A'
   READ
ENDDO
@ 23,32 SAY '                    '
@ 17,40 SAY ' '

*****  Verify Password Prior to Beginning Computations

IF S:REPLY2 = 'Y'
   @ 21,30 SAY 'Enter Your Password '
   STORE '        ' TO S:PASSWORD
   SET CONSOLE OFF
   ACCEPT TO S:PASSWORD
   SET CONSOLE ON
   IF S:PASSWORD <> '        '
      USE D:TECHCODE INDEX D:TECH
      FIND &S:WHO
      IF PSWD <> S:PASSWORD .OR. # = 0
         @ 23,18 SAY 'Request ABORTED ';
                   + '- Strike Any Key To Continue'
         WAIT
         RELEASE ALL LIKE S:*
         RETURN
      ENDIF
   ENDIF
ELSE
   RELEASE ALL LIKE S:*
   RETURN
ENDIF

*****  Display Processing Message to User

ERASE
@ 6,27 SAY 'Internal Statistics Update'
@ 8,35 SAY 'In Process'
@ 16,26 SAY '***** DO NOT INTERRUPT *****'

SELECT PRIMARY
USE D:OPEN1 INDEX D:OCASE1


*****  Begin Computing Loop

DO WHILE .NOT. EOF
   DO WHILE $(DATES,46,1) <> ' ' .AND. .NOT. EOF
      STORE CASE TO S:CASE
      STORE WHO TO S:WHO

      STORE 0 TO S:ASSIGNED
      STORE 0 TO S:ACTIVE
      STORE 0 TO S:TRANSMIT
      STORE 0 TO S:RESPOND
      STORE 0 TO S:CLOSED

      STORE $(DATES,46,1) TO S:DATECHG
      STORE $(DATES,6,5) TO S:RECEIPT
      STORE $(DATES,11,5) TO S:OPEN
      STORE $(DATES,16,5) TO S:XMIT
      STORE $(DATES,26,5) TO S:RESPONSE
      STORE $(DATES,36,5) TO S:CLOSE

      STORE 0 TO S:MAILDLAY
      STORE 0 TO S:XMITDLAY
      STORE 0 TO S:RESPDLAY
      STORE 0 TO S:CLOSDLAY
      STORE 0 TO S:PROCDLAY


*****  Calculate Time Span From Receipt to Case Open

      IF S:RECEIPT <> '     ' .AND. S:OPEN <> '     '
         IF $(S:RECEIPT,1,2) < $(S:OPEN,1,2)
            IF VAL($(S:OPEN,1,2))-VAL($(S:RECEIPT,1,2))=1
               STORE VAL($(S:OPEN,3,3))+365-;
                  VAL($(S:RECEIPT,3,3))+1 TO S:MAILDLAY
            ELSE
               IF VAL($(S:OPEN,1,2))-VAL($(S:RECEIPT,1,2))=2
                  STORE VAL($(S:OPEN,3,3))+730;
                     -VAL($ (S:RECEIPT,3,3))+1 TO S:MAILDLAY
               ELSE
                  STORE 999 TO S:MAILDLAY
               ENDIF
            ENDIF
         ELSE
             STORE VAL($(S:OPEN,3,3))-VAL($(S:RECEIPT,3,3));
                   +1 TO S:MAILDLAY
         ENDIF
      ENDIF
*****  Calculate Time Span From Case Open to Letter Transmit

      IF S:XMIT <> '      '
         IF $(S:OPEN,1,2) < $(S:XMIT,1,2)
            IF VAL($(S:XMIT,1,2))-VAL($(S:OPEN,1,2))=1
               STORE VAL($(S:XMIT,3,3))+365-;
                   VAL($(S:OPEN,3,3))+1 TO S:XMITDLAY
            ELSE
               IF VAL($(S:XMIT,1,2))-VAL($(S:OPEN,1,2))=2
                  STORE VAL($(S:XMIT,3,3))+730-;
                      VAL($(S:OPEN,3,3))+1 TO S:XMITDLAY
               ELSE
                  STORE 999 TO S:XMITDLAY
               ENDIF
            ENDIF
         ELSE
            STORE VAL($(S:XMIT,3,3))-VAL($(S:OPEN,3,3))+1 ;
                TO S:XMITDLAY
         ENDIF
      ENDIF

*****  Calculate Time Span From Letter Transmit to Item
*****  Manager Response

      IF S:RESPONSE <> '      '
         IF $(S:XMIT,1,2) < $(S:RESPONSE,1,2)
            IF VAL($(S:RESPONSE,1,2))-VAL($(S:XMIT,1,2))=1
               STORE VAL($(S:RESPONSE,3,3))+365-;
                   VAL($(S:XMIT,3,3))+1 TO S:RESPDLAY
            ELSE
               IF VAL($(S:RESPONSE,1,2)) - ;
                     VAL($(S:XMIT,1,2)) = 2
                  STORE VAL($(S:RESPONSE,3,3))+730 - ;
                        VAL($(S:XMIT,3,3))+1 TO S:RESPDLAY
               ELSE
                  STORE 999 TO S:RESPDLAY
               ENDIF
            ENDIF
         ELSE
            STORE VAL($(S:RESPONSE,3,3))-VAL($(S:XMIT,3,3));
                   + 1 TO S:RESPDLAY
         ENDIF
      ENDIF

*****  Calculate Time Span From Item Manager Response to
*****  Case Close

      IF S:CLOSE <> '      '
         IF $(S:RESPONSE,1,2) < $(S:CLOSE,1,2)
            IF VAL($(S:CLOSE,1,2))-VAL($(S:RESPONSE,1,2))=1
               STORE VAL($(S:CLOSE,3,3))+365 - ;
                   VAL($(S:RESPONSE,3,3))+1 TO S:CLOSDLAY
            ELSE
               IF VAL($(S:CLOSE,1,2)) - ;
                     VAL($(S:RESPONSE,1,2)) = 2
                  STORE VAL($(S:CLOSE,3,3))+730 - ;
                     VAL($(S:RESPONSE,3,3))+1 TO S:CLOSDLAY
               ELSE
                  STORE 999 TO S:CLOSDLAY
               ENDIF
            ENDIF
         ELSE
         STORE VAL($(S:CLOSE,3,3)) -;
              VAL($(S:RESPONSE,3,3))+1 TO S:CLOSDLAY
      ENDIF

*****  Calculate Time Span From Case Open to Case Close

      IF $(S:OPEN,1,2) < $(S:CLOSE,1,2)
         IF VAL($(S:CLOSE,1,2))-VAL($(S:OPEN,1,2)) = 1
            STORE VAL($(S:CLOSE,3,3)) + 365 - ;
                  VAL($(S:OPEN,3,3))+1 TO S:PROCDLAY
         ELSE
            IF VAL($(S:CLOSE,1,2))-VAL($(S:OPEN,1,2))=2
               STORE VAL($(S:CLOSE,3,3)) + 730 - ;
                     VAL($ (S:OPEN,3,3)) + 1 TO S:PROCDLAY
            ELSE
               STORE 999 TO S:PROCDLAY
            ENDIF
         ENDIF
      ELSE
         STORE VAL($(S:CLOSE,3,3)) - VAL($(S:OPEN,3,3));
              + 1 TO S:PROCDLAY
      ENDIF
   ENDIF
   SELECT SECONDARY
   USE D:QTIME INDEX D:QCASE

*****  Update Time Frame File With New Time Spans
*****  If a Record Does Not Exist For a Case, Create It

   FIND &S:CASE
   IF # = 0
      APPEND BLANK
      REPLACE CASE WITH S:CASE,WHO WITH S:WHO
      IF S:DATECHG <> 'N'
         STORE '9999' TO S:WHO
      ENDIF
   ENDIF
   IF S:DATECHG = 'N'
      STORE 1 TO S:ASSIGNED
      STORE 1 TO S:ACTIVE
   ENDIF

*****  Change Status From Active to Transmitted or
*****  Vice Versa

   IF S:XMITDLAY > 0 .AND. XMITDLAY = 0
      STORE S:ACTIVE - 1 TO S:ACTIVE
      STORE S:TRANSMIT + 1 TO S:TRANSMIT
   ELSE
      IF S:XMITDLAY = 0 .AND. XMITDLAY <> 0
         STORE S:ACTIVE + 1 TO S:ACTIVE
         STORE S:TRANSMIT - 1 TO S:TRANSMIT
      ENDIF
   ENDIF

*****  Change Status From Transmitted to Responded or
*****  Vice Versa

   IF S:RESPDLAY > 0 .AND. RESPDLAY = 0
      STORE S:TRANSMIT - 1 TO S:TRANSMIT
      STORE S:RESPOND + 1 TO S:RESPOND
   ELSE
      IF S:RESPDLAY = 0 .AND. RESPDLAY <> 0
         STORE S:TRANSMIT + 1 TO S:TRANSMIT
         STORE S:RESPOND - 1 TO S:RESPOND
      ENDIF
   ENDIF

*****  Change Status From Responded to Closed or
```

```
*****  Vice Versa

      IF S:CLOSDLAY > 0 .AND. CLOSDLAY = 0
         STORE S:RESPOND - 1 TO S:RESPOND
         STORE S:CLOSED + 1 TO S:CLOSED
      ELSE
         IF S:CLOSDLAY = 0 .AND. CLOSDLAY <> 0
            STORE S:RESPOND - 1 TO S:RESPOND
            STORE S:CLOSED + 1 TO S:CLOSED
         ENDIF
      ENDIF


*****  Update Time Span File

      REPLACE CASE WITH S:CASE,WHO WITH S:WHO,MAILDLAY :
WITH S:MAILDLAY,XMITDLAY WITH S:XMITDLAY,RESPDLAY WITH :
S:RESPDLAY,CLOSDLAY WITH S:CLOSDLAY,PROCDLAY WITH S:PROCDLAY

      SELECT SECONDARY
      USE D:TECHCODE INDEX D:TECH

*****  Update Techcode File

      FIND &S:WHO
      IF # <> 0
         REPLACE ASSIGNED WITH ASSIGNED + S:ASSIGNED,:
   ACTIVE WITH ACTIVE + S:ACTIVE,TRANSMIT WITH TRANSMIT :
+ S:TRANSMIT,RESPOND WITH RESPOND+S:RESPOND,CLOSED WITH :
CLOSED + S:CLOSED
      ENDIF
   ENDIF
      SELECT PRIMARY
      REPLACE DATES WITH $(DATES,1,45)+' '
      SKIP
   ENDDO
   SKIP
ENDDO

*****  Release All Local Memory Variables and All Files
*****  Used During Processing

SELECT PRIMARY
USE
SELECT SECONDARY
USE
RELEASE ALL LIKE S:*
RETURN

*****  END OF PROGRAM
```

XIV. JULIAN DATE CONVERSION MODULE

```
*************************************************************
**                                                         **
**   Date: 18 October 1984                                 **
**   Version: 1.0                                          **
**   Module Name: OJULIAN                                  **
**   Module Purpose: Convert Date (MMDDYY) to Julian       **
**   Module Interface Definition                           **
**      Inputs: V:MM,V:DD,V:YY                             **
**      Outputs: V:JULDATE                                 **
**   Module Processing Narrative Description:              **
**                                                         **
**         Receives a date in MMDDYY format and converts   **
**         it to a Julian date and returns the date to     **
**         the calling program.                            **
**                                                         **
**   Superordinate Modules: XOPEN2                         **
**   Subordinate Modules: None                             **
**   Author: J.G. BOYNTON                                  **
**                                                         **
*************************************************************

DO CASE
   CASE V:MM = 01
      STORE V:DD TO V:DAY
   CASE V:MM = 02
      STORE V:DD + 31 TO V:DAY
   CASE V:MM = 03
      STORE V:DD + 59 TO V:DAY
   CASE V:MM = 04
      STORE V:DD + 90 TO V:DAY
   CASE V:MM = 05
      STORE V:DD + 120 TO V:DAY
   CASE V:MM = 06
      STORE V:DD + 151 TO V:DAY
   CASE V:MM = 07
      STORE V:DD + 181 TO V:DAY
   CASE V:MM = 08
      STORE V:DD + 212 TO V:DAY
   CASE V:MM = 09
      STORE V:DD + 243 TO V:DAY
   CASE V:MM = 10
      STORE V:DD + 273 TO V:DAY
   CASE V:MM = 11
      STORE V:DD + 304 TO V:DAY
   CASE V:MM = 12
      STORE V:DD + 334 TO V:DAY
ENDCASE
IF INT(V:YY/4)*4 = V:YY .AND. V:DAY >= 60
   IF V:MM= 02 .AND. V:DD= 29
     STORE V:DAY TO V:DAY
   ELSE
     STORE V:DAY + 1 TO V:DAY
   ENDIF
ENDIF
STORE V:YY * 1000 + V:DAY TO V:JULIAN
STORE STR(V:JULIAN,5) TO V:JULDATE
RETURN

***** END OF PROGRAM
```

XV. COG COUNT MODULE

```
****************************************************************
**                                                            **
**   Date: 8 Jan 1984                                         **
**   Version: 1.0                                             **
**   Module Name: COGCNT                                      **
**   Module Purpose: Count the Active Cases Assigned to       **
**                   Any Given COG                            **
**                                                            **
**   Module Interface Definition                              **
**      Inputs: None                                          **
**      Outputs: None                                         **
**                                                            **
**   Module Processing Narrative Description:                 **
**                                                            **
**         Indexes the OPEN1 File by COG and Counts           **
**         The Number of Cases Assigned To Each COG           **
**                                                            **
**   Superordinate Modules: UTILMENU                          **
**   Subordinate Modules: None                                **
**   Author: R. G. NICHOLS                                     **
**                                                            **
****************************************************************

*****  Display Warning Message and Accept Contine Request

ERASE
@  1,24 SAY '***** COG Count Processing *****'
@  3,24 SAY '* * * * * * * * * * * * * * * * '
@  4,24 SAY '*                              * '
@  5,24 SAY '*            WARNING           * '
@  6,24 SAY '*                              * '
@  7,24 SAY '*   This Program Will Read     * '
@  8,24 SAY '*      All Records While       * '
@  9,24 SAY '*         Processing           * '
@ 10,24 SAY '*                              * '
@ 11,24 SAY '*    If Existing Files Are     * '
@ 12,24 SAY '*    Large, This Could Take    * '
@ 13,24 SAY '*           Hours              * '
@ 14,24 SAY '*                              * '
@ 15,24 SAY '* * * * * * * * * * * * * * * * '
@ 17,24 SAY '    Are You SURE You Want To'
@ 18,24 SAY '           Continue'
@ 19,24 SAY '         <Enter Y or N>' + CHR(7)
STORE ' ' TO CC:REPLY2
@ 21,40 GET CC:REPLY2
READ
DO WHILE !(CC:REPLY2) <> 'Y' .AND. !(CC:REPLY2) <> 'N'
   @ 23,32 SAY 'Enter Y or N Only' + CHR(7)
   @ 21,40 GET CC:REPLY2 PICTURE 'A'
   READ
ENDDO
@ 23,32 SAY '                 '
@ 17,40 SAY ' '

*****  Prompt For and Accept Password Verification

IF CC:REPLY2 = 'Y'
   @ 21,30 SAY 'Enter Your Password '
   STORE '        ' TO CC:PSWD
   SET CONSOLE OFF
   ACCEPT TO CC:PSWD
```

```
    SET CONSOLE ON
    IF CC:PSWD <> '          '
       USE D:TECHCODE INDEX D:TECH
       FIND &C:WHO
       IF PSWD <> CC:PSWD .OR. # = 0
          @ 23,18 SAY 'Request ABORTED - Strike Any Key To Continue'
          WAIT
          RELEASE ALL LIKE CC:*
          RETURN
       ENDIF
    ENDIF
 ELSE
    RELEASE ALL LIKE CC:*
    RETURN
 ENDIF

 *****  Begin Statistics Update

 ERASE
 @ 12,20 SAY '        CCG STATISTICS BEING PROCESSED'
 @ 14,20 SAY '               PLEASE STANDBY               '
 @ 20,20 SAY '***** DO NOT INTERRUPT WHILE PROCESSING *****'


 SELECT PRIMARY
 USE D:OPEN1 INDEX D:CCGCNT
 REINDEX
 SELECT SECONDARY
 USE D:COG INDEX D:COGS
 REPLACE COUNT WITH 0 FOR COUNT <> 0
 SELECT PRIMARY
 GOTO 2

 *****  Count the COGs Assigned Until End Of File Found

 DO WHILE .NOT. EOF
    STORE COG TO CC:CURRENT
    STORE 0 TO CC:COUNT

 *****  Increment Counter Until a Different COG or End Of
 *****  File Found

    DO WHILE COG = CC:CURRENT .AND. .NOT. EOF
       STORE CC:COUNT + 1 TO CC:COUNT
       SKIP
    ENDDO
    SELECT SECONDARY

 *****  Update IM Record

    FIND &CC:CURRENT
    IF # <> 0
       REPLACE COUNT WITH CC:COUNT
    ENDIF
    SELECT PRIMARY
 ENDDO
 USE
 SELECT SECONDARY
 USE
 RELEASE ALL LIKE CC:*
 RETURN

 ***** END OF PROGRAM
```

XVI. BI-WEEKLY STATISTICS REPORT MODULE

```
**********************************************************
**                                                      **
**   DATE: 27 JANUARY 1984                              **
**   VERSION: 1.0                                       **
**   MODULE NAME: XXBISTAT                              **
**   MODULE PURPOSE: CALCULATE BI-WEEKLY STATISTICS     **
**   MODULE INTERFACE DEFINITION                        **
**      INPUTS: C:WHO, C;JULIAN                         **
**      OUTPUTS:                                        **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:           **
**                                                      **
**        ACCEPTS CLOSING DATE FOR THE REPORT IN MMDDYY **
**        FORMAT. DATE IS CONVERTED TO JULIAN FORMAT BY **
**        CALLING OJULIAN. DATES FOR PREVIOUS YEAR AND  **
**        OLDEST YEAR ARE CALCULATED AND STORED INTO    **
**        MEMORY VARIABLES. OPEN AND CLOSE DATABASES ARE **
**        SEARCHED SEQUENTIALLY FOR ANY CASES WHICH WERE **
**        OPENED OR CLOSED DURING THE PERIOD IN QUESTION. **
**        THE BIWKSTAT DATABASE IS READ FOR THE COUNTS  **
**        OF THE LAST REPORT TO CALCULATE THE TREND, AND **
**        THEN THE CURRENT COUNTS ARE PLACED INTO THE   **
**        BIWKSTAT DATABASE FOR FUTURE REFERENCE. THE   **
**        REPORT IS THEN PRINTED USING THE COUNTS FROM  **
**        THIS PROCESSING.  THE PROGRAM SHOULD BE RUN   **
**        IN BATCH, DURING 'OFF' HOURS, AND ONLY ON THE **
**        SPECIFIC DAY FOR THE CUTOFF TO KEEP THE TREND **
**        DATA REAL.                                    **
**   SUPERORDINATE MODULES: SUPRPTS                     **
**   SUBORDINATE MODULES: NONE                          **
**   AUTHOR: J.G. BOYNTON                               **
**                                                      **
**********************************************************

***** INITIALIZATION OF VARIABLES

STORE '      ' TO BW:CURR
STORE '      ' TO BW:PREV
STORE '      ' TO BW:OLD
STORE 0 TO BW:CREC
STORE 0 TO BW:CCLOS
STORE 0 TO BW:C9COG
STORE 0 TO BW:CSPCC
STORE 0 TO BW:PREC
STORE 0 TO BW:PIN
STORE 0 TO BW:PCLOS
STORE 0 TO BW:P9COG
STORE 0 TO BW:PSPCC
STORE 0 TO BW:OREC
STORE 0 TO BW:OCLOS
STORE 0 TO BW:OCIOS
STORE 0 TO BW:O9COG
STORE 0 TO BW:OSPCC
STORE 0 TO BW:CRECC
STORE 0 TO BW:PRECC
STORE 0 TO BW:ORECC
STORE 0 TO BW:OPERR
STORE 0 TO BW:CERROR
STORE 0 TO BW:PERROR
STORE 0 TO BW:OERROR
```

```
***** THIS SEQUENCE CALCULATES THE UPPER AND LOWER YEARS
***** FOR INPUT AND IS BASED ON THE CURRENT JULIAN DATE
***** C:JULIAN. BW:LLIMIT= YEAR MINUS TWO YEARS
***** BW:ULIMIT = YEAR PLUS ONE YEAR

STORE $(C:JULIAN,1,2) TO TEMP1
STORE VAL(TEMP1) TO TEMP1A
STORE VAL('2') TO LOW
STORE VAL('1') TO HIGH
STORE TEMP1A-LOW TO LLMT
STORE TEMP1A+HIGH TO ULMT
STORE STR(LLMT,2) TO BW:LLIMIT
STORE STR(ULMT,2) TO BW:ULIMIT
RELEASE TEMP1,TEMP1A,LOW,HIGH,LLMT,ULMT

          STORE '      ' TO BW:EDATE
          STORE T TO BW:CHOOSE
          ERASE
          DO WHILE BW:CHOOSE

              @ 10,20 SAY 'PLEASE ENTER THE CLOSING DATE'
              @ 11,20 SAY '  FOR THIS BIWEEKLY REPORT   '
              @ 12,20 SAY '          <MMDDYY>           '
              @ 14,30 GET BW:EDATE PICTURE '999999'
              READ
              IF $(BW:EDATE,1,2) <'01' ;
                  .OR. $(BW:EDATE,1,2)>'12';
                  .OR. $(BW:EDATE,3,2) <'01' ;
                  .OR. $(BW:EDATE,3,2)> '31' ;
                  .OR. $(BW:EDATE,5,2) < BW:LLIMIT ;
                  .OR. $(BW:EDATE,5,2)> BW:ULIMIT
                      @ 23,30 SAY 'DATE OUT OF RANGE'
              ELSE
                      STORE F TO BW:CHOOSE
              ENDIF
          ENDDO<BW:CHOOSE>
          @ 23,30 SAY '                    '
          RELEASE BW:CHOOSE,BW:LLIMIT,BW:ULIMIT

***** CALCULATE THE DATES TO BE SEARCHED FOR AND ASSIGN
***** THEM TO THE VARABLES: BW:CURR,BW:PREV,BW:OLD

***** ENTER THE CALL TO C:OJULIAN TO CHANGE MMDDYY TO
***** JULIAN FORMAT

           STORE VAL($(BW:EDATE,1,2)) TO V:MM
           STORE VAL($(BW:EDATE,3,2)) TO V:DD
           STORE VAL($(BW:EDATE,5,2)) TO V:YY
           DO C:OJULIAN
           STORE V:JULDATE TO BW:CURR
           RELEASE ALL LIKE V:*

           STORE $(BW:CURR,1,2) TO BW:TYR
           STORE VAL(BW:TYR) TO BW:TYR3
           STORE BW:TYR3-1 TO BW:TYR1
           STORE BW:TYR3-2 TO BW:TYR2
           STORE STR(BW:TYR1,2) TO BW:PREVT
           STORE STR(BW:TYR2,2) TO BW:OLDT
           STORE BW:PREVT+$(BW:CURR,3,3) TO BW:PREV
           STORE BW:OLDT+$(BW:CURR,3,3) TO BW:OLD
           RELEASE BW:PREVT,BW:OLDT,BW:TYR,BW:TYR1,BW:TYR2

           ERASE
           @ 12,20 SAY ' BIWEEKLY STATUS REPORT IS BEING ';
                  +'PROCESSED'
           @ 14,20 SAY '             PLEASE STANDBY         '
           @ 23,20 SAY ' **** DO NOT INTERRUPT WHILE '
```

```
            +'PROCESSING ****'
***** END DATE CHANGE AND ASSIGNMENT HERE
      USE D:OPEN1
      DO WHILE .NOT. EOF
         STORE DATES TO M:DATES
         STORE COG TO M:COG
         STORE $(M:DATES,11,5) TO BW:ODAT
         STORE $(M:DATES,36,5) TO BW:CDAT
         IF $(BW:CDAT,1,2) = $(BW:CURR,1,2)
            STORE BW:CREC + 1 TO BW:CREC
            IF BW:CDAT <> '     '
               STORE BW:CCLOS + 1 TO BW:CCLOS
            ELSE
               IF $(M:COG,1,1) = '9'
                  STORE BW:C9COG + 1 TO BW:C9COG
               ELSE
                  STORE BW:CSPCC + 1 TO BW:CSPCC
               ENDIF
            ENDIF
         ENDIF < THIS CASE IN CURRENT YEAR COUNT>
         IF $(BW:CDAT,1,2) = $(BW:PREV,1,2)
            STORE BW:PREC + 1 TO BW:PREC
            IF BW:CDAT <> '     '
               STORE BW:PCLOS + 1 TO BW:PCLOS
            ELSE
               IF $(M:COG,1,1) = '9'
                  STORE BW:P9COG + 1 TO BW:P9COG
               ELSE
                  STORE BW:PSPCC + 1 TO BW:PSPCC
               ENDIF
            ENDIF
         ENDIF < THIS CASE IN PREVIOUS YEAR COUNT>
         IF $(BW:CDAT,1,2) = $(BW:OLD,1,2)
            STORE BW:OREC + 1 TO BW:OREC
            IF BW:CDAT <> '     '
               STORE BW:OCLOS + 1 TO BW:OCLOS
            ELSE
               IF $(M:COG,1,1) = '9'
                  STORE BW:O9COG + 1 TO BW:O9COG
               ELSE
                  STORE BW:OSPCC + 1 TO BW:OSPCC
               ENDIF
            ENDIF
         ENDIF < THIS CASE IN OLDEST YEAR COUNT>
         IF $(BW:CDAT,1,2)<>$(BW:CURR,1,2) .AND.;
            $(BW:CDAT,1,2)<>$(BW:PREV,1,2) .AND.;
            $(BW:CDAT,1,2)<>$(BW:OLD,1,2)
              STORE BW:OPERR + 1 TO BW:OPERR
         ENDIF
         SKIP
      ENDDO <SEARCH OF OPEN1.DBF >
***** END OF THE OPENFILE SEARCH, NOW FOR THE CLOSED FILES
      USE D:CLOSE1
      DO WHILE .NOT. EOF
         STORE DATES TO M:DATES
         STORE COG TO M:COG
```

```
   STORE $(M:DATES,11,5) TO BW:ODAT
   STORE $(M:DATES,36,5) TO BW:CDAT
   IF $(BW:CDAT,1,2) = $(BW:CURR,1,2)
       STORE BW:CRECC + 1 TO BW:CRECC
       IF BW:CDAT <> '     '
           STORE BW:CERROR + 1 TO BW:CERROR
       ENDIF
   ENDIF < THIS CASE IN CURRENT YEAR COUNT>

   IF $(BW:CDAT,1,2) = $(BW:PREV,1,2)
       STORE BW:PRECC + 1 TO BW:PRECC
       IF BW:CDAT <> '     '
           STORE BW:PERROR + 1 TO BW:PERROR
       ENDIF
   ENDIF < THIS CASE IN PREVIOUS YEAR COUNT>

   IF $(BW:CDAT,1,2) = $(BW:OLD,1,2)
       STORE BW:ORECC + 1 TO BW:ORECC
       IF BW:CDAT <> '     '
           STORE BW:OERROR + 1 TO BW:OERROR
       ENDIF
   ENDIF < THIS CASE IN OLDEST YEAR COUNT>
   SKIP

ENDDO <SEARCH OF CLOSE1.DBF >

STORE BW:C9CCG + BW:CSPCC TO BW:CTOT
STORE BW:P9CCG + BW:PSPCC TO BW:PTOT
STORE BW:O9CCG + BW:OSPCC TO BW:OTOT
STORE BW:OERROR+BW:PERROR+BW:CERROR TO BW:TERROR

STORE '19' + $(BW:CURR,1,2) TO BW:CYEAR
STORE '19' + $(BW:PREV,1,2) TO BW:PYEAR
STORE '19' + $(BW:OLD,1,2) TO BW:OYEAR

USE D:BIWKSTAT

STORE TOTALS TO BW:SCTOT
SKIP
STORE TOTALS TO BW:SPTOT
SKIP
STORE TOTALS TO BW:SOTOT

STORE '    ' TO BW:CLABEL
STORE '    ' TO BW:PLABEL
STORE '    ' TO BW:OLABEL

IF BW:SCTOT < BW:CTOT
     STORE 'UP' TO BW:CLABEL
ENDIF
IF BW:SCTOT > BW:CTOT
     STORE 'DOWN' TO BW:CLABEL
ENDIF
IF BW:SPTOT < BW:PTOT
    STORE 'UP' TO BW:PLABEL
ENDIF
IF BW:SPTOT > BW:PTOT
    STORE 'DOWN' TO BW:PLABEL
ENDIF
IF BW:SOTOT < BW:OTOT
    STORE 'UP' TO BW:OLABEL
ENDIF
IF BW:SCTOT > BW:OTOT
    STORE 'DOWN' TO BW:OLABEL
ENDIF

STORE BW:SOTOT-BW:OTOT TO BW:OTRD
STORE BW:SPTOT-BW:PTOT TO BW:PTRD
```

```
          STORE BW:SCTOT-BW:CTOT TO BW:CTRD

SET FORMAT TO PRINT

          @ 2,30 SAY '     CODE 9142 TECHNICAL BRANCH'
          @ 4,30 SAY '     QUALITY DEFICIENT MATERIAL'
          @ 6,30 SAY '        BIWEEKLY STATUS REPORT  '
          @ 8,30 SAY '              THRU'
          @ 8,47 SAY $(BW:EDATE,1,2)+'/'+$(BW:EDATE,3,2)+;
              '/'+$(BW:EDATE,5,2)
          @ 10,30 SAY '        JULIAN DATE'
          @ 10,50 SAY BW:CURR
          @ 12,10 SAY '                                                    '
              +'  SPCC      9-COG      TOTAL              '
          @ 13,10 SAY 'CALENDAR      CASES          CASES       '
              +'  OPEN      OPEN       OPEN         TREND'
          @ 14,10 SAY '     YEAR  RECEIVED          CLOSED      '
              +' CASES      CASES      CASES              '

          @ 18,13 SAY BW:OYEAR
          STORE BW:OREC+BW:ORECC TO BW:TOREC
          @ 18,18 SAY BW:TOREC
          @ 18,30 SAY BW:ORECC
          @ 18,40 SAY BW:OSPCC
          @ 18,50 SAY BW:O9COG
          @ 18,60 SAY BW:OTOT
          @ 18,70 SAY BW:OTRD
          @ 18,80 SAY BW:OLABEL

          @ 20,13 SAY BW:PYEAR
          STORE BW:PREC+BW:PRECC TO BW:TPREC
          @ 20,18 SAY BW:TPREC
          @ 20,30 SAY BW:PRECC
          @ 20,40 SAY BW:PSPCC
          @ 20,50 SAY BW:P9COG
          @ 20,60 SAY BW:PTOT
          @ 20,70 SAY BW:PTRD
          @ 20,80 SAY BW:PLABEL

          @ 22,13 SAY BW:CYEAR
          STORE BW:CREC+BW:CRECC TO BW:TCREC
          @ 22,18 SAY BW:TCREC
          @ 22,30 SAY BW:CRECC
          @ 22,40 SAY BW:CSPCC
          @ 22,50 SAY BW:C9COG
          @ 22,60 SAY BW:CTOT
          @ 22,70 SAY BW:CTRD
          @ 22,80 SAY BW:CLABEL

          @ 36,24 SAY '           CASE INPUT COMPARISON'
          @ 40,25 SAY   BW:PYEAR
          @ 40,40 SAY   BW:CYEAR
          @ 40,55 SAY 'TREND'
          STORE BW:PREC+BW:PRECC TO BW:TPREC
          @ 42,18 SAY BW:TPREC
          @ 42,32 SAY BW:CREC
          STORE '    ' TO BW:TLABEL
          IF BW:TPREC > BW:CREC
              STORE 'DOWN' TO BW:TLABEL
          ENDIF
          IF BW:TPREC < BW:CREC
              STORE 'UP' TO BW:TLABEL
          ENDIF
          STORE BW:CREC-BW:TPREC TO BW:TTRD
          @ 42,48 SAY BW:TTRD
          @ 42,59 SAY BW:TLABEL
EJECT

***** PAGE TWO
```

```
          STORE BW:CREC+BW:PREC+BW:OREC TO BW:TREC
          STORE BW:CRECC+BW:PRECC+BW:ORECC TO BW:TRECC

          @ 2,30 SAY '      CODE 9142 TECHNICAL BRANCH'
          @ 4,30 SAY '      QUALITY DEFICIENT MATERIAL'
          @ 6,30 SAY '         BIWEEKLY STATUS REPORT   '
          @ 8,30 SAY '                THRU'
          @ 8,47 SAY $(BW:EDATE,1,2)+'/'+$(BW:EDATE,3,2);
                +'/'+$(BW:EDATE,5,2)
          @ 10,33 SAY '       JULIAN DATE'
          @ 10,52 SAY BW:CURR

          @ 14,25 SAY 'TOTAL RECORDS ON OPEN FILE:'
          @ 14,70 SAY BW:TREC
          @ 16,25 SAY 'TOTAL RECORDS ON CLOSED FILES:'
          @ 16,70 SAY BW:TRECC
          @ 18,25 SAY 'RECORDS WITH INVALID DATES,OPEN FILE:'
          @ 18,69 SAY BW:OPERR - 1
          @ 20,25 SAY 'RECORDS WITH INVALID DATES,CLOSED '
                +'FILE:'
          @ 20,70 SAY BW:TERROR
          @ 28,40 SAY 'END OF REPORT'

EJECT
SET FORMAT TO SCREEN

***** STUFF NEW COUNTS INTO THE BIWKSTAT DATABASE

          USE D:BIWKSTAT.DBF
          REPLACE TOTALS WITH BW:CTRD
          SKIP
          REPLACE TOTALS WITH BW:PTRD
          SKIP
          REPLACE TOTALS WITH BW:OTRD

          RELEASE ALL LIKE BW:*
ERASE
RETURN

***** END OF PROGRAM
```

XVII. MONTHLY STATISTICS REPORT MODULE

```
************************************************************
**                                                        **
**   DATE:  8 JANUARY 1984                                **
**   VERSION: 1.0                                         **
**   MODULE NAME: XXMNSTAT                                **
**   MODULE PURPOSE: CALCULATE MONTHLY STATISTICS REPORT  **
**   MODULE INTERFACE DEFINITION                          **
**      INPUTS:  C:WHC, C:JULIAN                          **
**      OUTPUTS: NONE                                     **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:             **
**                                                        **
**        ACCEPTS THE ENDING DATE AND THEN CALCULATES THE **
**        JULIAN DATE FOR THIS YEAR AND THE PRIOR TWO     **
**        YEARS.  THE OPEN AND CLOSE DATA BASES ARE       **
**        SEARCHED SEQUENTIALLY TO FIND THE STATUS OF     **
**        EACH CASE IN THE DESIGNATED TIME PERIODS AND    **
**        COUNTS ARE SUMMARIZED INTO MEMORY VARIABLES.    **
**        AFTER PROCESSING, THE REPORTS ARE GENERATED TO  **
**        THE PRINTER.  THIS INCLUDES THE MONTHLY STATUS  **
**        REPORT BY YEAR, COMMAND KEY INDICATORS FOR      **
**        CURRENT YEAR, AND THE SUMMARY REPORT FOR THE    **
**        CURRENT YEAR.  THIS SHOULD BE DONE 'OFF' TIME   **
**        AND WHEN THE SYSTEM IS NOT BEING USED. OUTPUT   **
**        IS DIRECTED TO THE PRINTER.                     **
**        ERROR LISTING CAN BE RETREIVED IN D:MSBAD.TXT   **
**        BY 'TYPING' USING THE OPERATING SYSTEM.         **
**                                                        **
**   SUPERORDINATE MODULES: SUPRPTS                       **
**   SUBORDINATE MODULES: NONE                            **
**   AUTHOR: J.G. BOYNTON                                 **
**                                                        **
************************************************************

SET ALTERNATE TO D:MSBAD
STORE 1 TO MS:ROW

***** INITIALIZATION OF VARIABLES

STORE 0 TO MS:CRCVD
STORE 0 TO MS:OPTOT
STORE 0 TO MS:CLTOT
STORE 0 TO MS:OPERR
STORE 0 TO MS:CLERR


***** THIS SEQUENCE CALCULATES THE UPPER AND LOWER YEARS
***** FOR INPUT AND IS BASED ON THE CURRENT JULIAN DATE
***** C:JULIAN. MS:LLIMIT= YEAR MINUS TWO YEARS
***** MS:ULIMIT = YEAR PLUS ONE YEAR

STORE $(C:JULIAN,1,2) TO TEMP1
STORE VAL(TEMP1) TO TEMP1A
STORE VAL('2') TO LOW
STORE VAL('1') TO HIGH
STORE TEMP1A-LOW TO LLMT
STORE TEMP1A+HIGH TO ULMT
STORE STR(LLMT,2) TO MS:LLIMIT
STORE STR(ULMT,2) TO MS:ULIMIT
RELEASE TEMP1,TEMP1A,LOW,HIGH,LLMT,ULMT

***** INPUT OF REPORT CLOSING DATE
```

```
          STCRE '      ' TO MS:EDATE
          STORE T TO MS:CHOOSE
          ERASE
          DO WHILE MS:CHOOSE
               @ 10,20 SAY 'PLEASE ENTER THE CLOSING DATE'
               @ 11,2C SAY '    FOR THIS MONTHLY REPORT   '
               @ 12,20 SAY '            <MMDDYY>          '
               @ 14,31 GET MS:EDATE PICTURE '999999'
               READ
               IF $(MS:EDATE,1,2) < '01' ;
                  .OR. $(MS:EDATE,1,2) >'12' ;
                  .OR. $(MS:EDATE,3,2) < '01' ;
                  .OR. $(MS:EDATE,3,2) >'31' ;
                  .OR. $(MS:EDATE,5,2) < MS:LLIMIT ;
                  .OR.$(MS:EDATE,5,2)>MS:ULIMIT
                      @ 23,30 SAY ' DATE OUT OF RANGE'
               ELSE
                  STORE F TO MS:CHOOSE
               ENDIF
          ENDDO <MS:CHCOSE>
          @ 23,30 SAY '                                  '
          RELEASE MS:CHOOSE,MS:LLIMIT,MS:ULIMIT

***** CALCULATE DATES TO BE SEARCHED FOR AND ASSIGNS THEM
***** TC VARIABLES


***** ENTER THE CALL TO C:OJULIAN TO CHANGE MMDDYY TC
***** JULIAN FORMAT

           STORE VAL($(MS:EDATE,1,2)) TO V:MM
           STORE VAL($(MS:EDATE,3,2)) TO V:DD
           STORE VAL($(MS:EDATE,5,2)) TO V:YY
           DC C:OJULIAN
           STORE V:JULDATE TO MS:CJUL


***** THIS CALCULATES THE JULIAN DATE OF THE FIRST DAY
***** OF THE MONTH OF INTEREST

           STORE VAL('01') TO V:DD
           DC C:OJULIAN
           STORE V:JULDATE TO MS:CJUL1

           STORE $(MS:CJUL,1,2) TO MS:TYR
           STORE VAL(MS:TYR) TO MS:TYR3
           STORE MS:TYR3-1 TC MS:TYR1
           STORE MS:TYR3-2 TO MS:TYR2
           STORE STR(MS:TYR1,2) TO MS:PREVT
           STORE STR(MS:TYR2,2) TO MS:OLDT
***** CALCULATE THE CALENDAR AND JULIAN DATES FOR THE
***** PREVIOUS YEAR

           STORE VAL($(MS:EDATE,1,2)) TO V:MM
           STORE VAL($(MS:EDATE,3,2)) TO V:DD
           STORE VAL(MS:PREVT) TO V:YY
           DC C:OJULIAN
           STORE V:JULDATE TC MS:PJUL

**** CALCULATES FIRST DAY OF MONTH IN PREVIOUS YEAR

           STORE VAL('C1') TC V:DD
           DC C:OJULIAN
           STORE V:JULDATE TC MS:PJUL1

***** CALCULATES ENDDATE OF MONTH IN OLDEST YEAR

           STORE VAL($(MS:EDATE,1,2)) TO V:MM
```

```
            STORE VAL($(MS:EDATE,3,2)) TO V:DD
            STORE VAL(MS:OLDT) TO V:YY
            DO C:OJULIAN
            STORE V:JULDATE TO MS:OJUL

***** CALCULATES FIRST DAY OF MONTH IN OLDEST YEAR

            STORE VAL('01') TO V:DD
            DO C:OJULIAN
            STORE V:JULDATE TO MS:OJUL1

            RELEASE MS:PREVT,MS:OLDT,MS:TYR,MS:TYR1,MS:TYR2;
                    MS:TYR3
            RELEASE ALL LIKE V:*


            ERASE
            @ 12,20 SAY ' MONTHLY STATUS REPORT IS BEING ;
                    +'PROCESSED'
            @ 14,20 SAY '          PLEASE STANDBY          '
            @ 23,20 SAY '**** DO NOT INTERRUPT WHILE ;
                    +'PROCESSING ****'

***** END DATE CHANGE AND ASSIGNMENT HERE


***** SEARCH THE OPEN DATABASE

           STORE 0 TO MS:CO1
           STORE 0 TO MS:CO2
           STORE 0 TO MS:CO3
           STORE 0 TO MS:CO4
           STORE 0 TO MS:PO1
           STORE 0 TO MS:PO2
           STORE 0 TO MS:PO3
           STORE 0 TO MS:PO4
           STORE 0 TO MS:OO1
           STORE 0 TO MS:OO2
           STORE 0 TO MS:OO3
           STORE 0 TO MS:OO4
           STORE 0 TO MS:PTOT
           STORE 0 TO MS:OTOT


           USE D:OPEN1

           DO WHILE .NOT. EOF
              STORE DATES TO M:DATES

              STORE $(M:DATES,11,5) TO MS:ODAT
              STORE $(M:DATES,36,5) TO MS:CDAT
***** IF CASE IS IN CURRENT YEAR

              IF $(MS:CDAT,1,2) = $(MS:CJUL,1,2)

                 IF MS:CDAT > MS:CJUL1 .AND. MS:ODAT<MS:CJUL
                      STORE MS:CRCVD + 1 TO MS:CRCVD

***** IF CASE IS STILL OPEN IT SHOULD BE IN THIS FILE

                      IF MS:CDAT = '     '
                         STORE VAL($(MS:CJUL,3,3)) TO V:CDAT
                         STORE VAL($(MS:ODAT,3,3)) TO V:CDAT
                         STORE V:CDAT - V:ODAT TO V:TIMEN
                         STORE STR(V:TIMEN,3) TO MS:TIME
                         RELEASE ALL LIKE V:*

                         DO CASE
                            CASE MS:TIME < '61'
```

```
                                STORE MS:CO1 + 1 TO MS:CO1
                           CASE MS:TIME < '121'
                                STORE MS:CO2 + 1 TO MS:CO2
                           CASE MS:TIME < '181'
                                STORE MS:CO3 + 1 TO MS:CO3
                           CASE MS:TIME > '180'
                                STORE MS:CO4 + 1 TO MS:CO4
                        ENDCASE
                    ENDIF
                ENDIF
            ENDIF < CASE OPENED IN THE CURRENT YEAR >


***** IF CASE IS IN PREVIOUS YEAR

            IF $(MS:CDAT,1,2) = $(MS:PJUL,1,2)

                IF MS:ODAT > MS:PJUL1 .AND. MS:ODAT<MS:PJUL
                     STORE MS:PTOT + 1 TO MS:PTOT

***** IF CASE IS STILL OPEN IT SHOULD BE IN THIS FILE

                    IF MS:CDAT = '      '
                        STORE VAL($(MS:PJUL,3,3)) TO V:CDAT
                        STORE VAL($(MS:ODAT,3,3)) TO V:ODAT
                        STORE V:CDAT - V:ODAT TO V:TIMEN
                        STORE STR(V:TIMEN,3) TO MS:TIME
                        RELEASE ALL LIKE V:*

                        DO CASE
                           CASE MS:TIME < '61'
                                STORE MS:PO1 + 1 TO MS:PO1
                           CASE MS:TIME < '121'
                                STORE MS:PO2 + 1 TO MS:PO2
                           CASE MS:TIME < '181'
                                STORE MS:PO3 + 1 TO MS:PO3
                           CASE MS:TIME > '180'
                                STORE MS:PO4 + 1 TO MS:PO4
                        ENDCASE
                    ENDIF
                ENDIF
            ENDIF < CASE OPENED IN THE PREVIOUS YEAR >

***** IF CASE IS IN OLDEST YEAR

            IF $(MS:ODAT,1,2) = $(MS:OJUL,1,2)

                IF MS:ODAT > MS:OJUL1 .AND. MS:ODAT<MS:OJUL
                     STORE MS:OTOT + 1 TO MS:OTOT

***** IF CASE IS STILL OPEN IT SHOULD BE IN THIS FILE

                    IF MS:CDAT = '      '
                        STORE VAL($(MS:OJUL,3,3)) TO V:CDAT
                        STORE VAL($(MS:ODAT,3,3)) TO V:ODAT
                        STORE V:CDAT - V:ODAT TO V:TIMEN
                        STORE STR(V:TIMEN,3) TO MS:TIME
                        RELEASE ALL LIKE V:*

                        DO CASE
                           CASE MS:TIME < '61'
                                STORE MS:OO1 + 1 TO MS:CO1
                           CASE MS:TIME < '121'
                                STORE MS:OO2 + 1 TO MS:CO2
                           CASE MS:TIME < '181'
                                STORE MS:OO3 + 1 TO MS:CO3
                           CASE MS:TIME > '180'
                                STORE MS:OO4 + 1 TO MS:CO4
                    ENDCASE
                 ENDIF
              ENDIF
           ENDIF < CASE OPENED IN THE OLDEST YEAR >

           IF $(MS:CDAT,1,2)<>$(MS:CJUL,1,2) .AND.;
              $(MS:CDAT,1,2)<>$(MS:PJUL,1,2) .AND.;
              $(MS:CDAT,1,2)<>$(MS:OJUL,1,2)
                STORE MS:OPERR + 1 TO MS:OPERR
                STORE CASE TO MS:CASE
                 SET ALTERNATE ON
                 ? MS:ROW,10 SAY 'OCASE'
                 ? MS:ROW,18 SAY MS:CASE
                 ? MS:ROW,30 SAY $(MS:ODAT,1,2)+'/';
                   +$(MS:ODAT,3,2)+'/'+$(MS:ODAT,5,2)
                 ? MS:ROW,40 SAY $(MS:CDAT,1,2)+'/'+;
                   $(MS:CDAT,3,2)+'/'+$(MS:CDAT,5,2)
                 STORE MS:ROW + 1 TO MS:ROW
                 SET ALTERNATE OFF
           ENDIF

           STORE MS:CPTOT + 1 TO MS:OPTOT
           SKIP

        ENDDO < WHILE NOT EOF IN OPEN FILE >

***** START THE SEARCH AND COUNT IN THE CLOSED DATABASE

***** INITIALIZATION OF VARIABLES FOR CLOSED FILE

        STORE 0 TO MS:OCL1
        STORE 0 TO MS:OCL2
        STORE 0 TO MS:OCL3
        STORE 0 TO MS:OCL4
        STORE 0 TO MS:PCL1
        STORE 0 TO MS:PCL2
        STORE 0 TO MS:PCL3
        STORE 0 TO MS:PCL4
        STORE 0 TO MS:CCL1
        STORE 0 TO MS:CCL2
        STORE 0 TO MS:CCL3
        STORE 0 TO MS:CCL4

        USE D:CLOSE1

        DO WHILE .NOT. EOF
           STORE DATES TO M:DATES

           STORE $(M:DATES,11,5) TO MS:ODAT
           STORE $(M:DATES,36,5) TO MS:CDAT

           IF $(MS:CDAT,1,2) = $(MS:CJUL,1,2)

               IF MS:CDAT > MS:CJUL1 .AND. MS:CDAT<MS:CJUL
                    STORE MS:CRCVD + 1 TO MS:CRCVD

                  IF MS:CDAT <> '     '
                      STORE VAL($(MS:CDAT,3,3)) TO V:CDAT
                      STORE VAL($(MS:ODAT,3,3)) TO V:CDAT
                      STORE V:CDAT - V:ODAT TO V:TIMEN
                      STORE STR(V:TIMEN,3) TO MS:TIME
                      RELEASE ALL LIKE V:*

                      DO CASE
                         CASE MS:TIME < '61'
                              STORE MS:CCL1 + 1 TO MS:CCL1
                         CASE MS:TIME < '121'
```

```
                                STORE MS:CCL2 + 1 TO MS:CCL2
                           CASE MS:TIME < '181'
                                STORE MS:CCL3 + 1 TO MS:CCL3
                           CASE MS:TIME > '180'
                                STORE MS:CCL4 + 1 TO MS:CCL4
                        ENDCASE
                    ENDIF
                ENDIF
            ENDIF < CASE OPENED IN THE CURRENT YEAR >


***** IF CASE IS IN PREVIOUS YEAR

            IF $(MS:CDAT,1,2) = $(MS:PJUL,1,2)

                IF MS:CDAT > MS:PJUL1 .AND. MS:CDAT<MS:PJUL
                     STORE MS:PTOT + 1 TO MS:PTOT

                    IF MS:CDAT <>  '      '
                        STORE VAL($(MS:CDAT,3,3)) TO V:CDAT
                        STORE VAL($(MS:ODAT,3,3)) TO V:ODAT
                        STORE V:CDAT - V:ODAT TO V:TIMEN
                        STORE STR(V:TIMEN,3) TO MS:TIME
                        RELEASE ALL LIKE V:*

                        DO CASE
                           CASE MS:TIME < '61'
                                STORE MS:PCL1 + 1 TO MS:PCL1
                           CASE MS:TIME < '121'
                                STORE MS:PCL2 + 1 TO MS:PCL2
                           CASE MS:TIME < '181'
                                STORE MS:PCL3 + 1 TO MS:PCL3
                           CASE MS:TIME > '180'
                                STORE MS:PCL4 + 1 TO MS:PCL4
                        ENDCASE
                    ENDIF
                ENDIF
            ENDIF < CASE CLOSED IN THE PREVIOUS YEAR >

***** IF CASE IS IN OLDEST YEAR

            IF $(MS:CDAT,1,2) = $(MS:OJUL,1,2)

                IF MS:CDAT > MS:OJUL1 .AND. MS:CDAT<MS:OJUL
                     STORE MS:OTOT + 1 TO MS:OTOT

***** IF CASE IS CLOSED < IT SHOULD BE TO BE IN THIS FILE >

                    IF MS:CDAT <>  '      '
                        STORE VAL($(MS:CDAT,3,3)) TO V:CDAT
                        STORE VAL($(MS:ODAT,3,3)) TO V:ODAT
                        STORE V:CDAT - V:ODAT TO V:TIMEN
                        STORE STR(V:TIMEN,3) TO MS:TIME
                        RELEASE ALL LIKE V:*

                        DO CASE
                           CASE MS:TIME < '61'
                                STORE MS:OCL1 + 1 TO MS:OCL1
                           CASE MS:TIME < '121'
                                STORE MS:OCL2 + 1 TO MS:OCL2
                           CASE MS:TIME < '181'
                                STORE MS:OCL3 + 1 TO MS:OCL3
                           CASE MS:TIME > '180'
                                STORE MS:OCL4 + 1 TO MS:OCL4
                        ENDCASE
                    ENDIF
                ENDIF
```

```
           ENDIF < CASE CLOSED IN TH

           IF  $(MS:CDAT,1,2)<>$(MS:C
               $(MS:CDAT,1,2)<>$(MS:P
               $(MS:CDAT,1,2)<>$(MS:C
                 STORE MS:CLERR + 1
                 STORE CASE TO MS:CA
                  SET ALTERNATE ON
                  ? MS:ROW,10 SAY 'C
                  ? MS:ROW,18 SAY MS
                  ? MS:ROW,30 SAY $(
                    +$(MS:ODAT,3,2)+
                  ? MS:ROW,40 SAY $(
                    $(MS:CDAT,3,2)+'
                  STORE MS:ROW + 1 T
                  SET ALTERNATE OFF

           ENDIF
           STORE MS:CLTOT + 1 TO MS:

           SKIP

        ENDDO < SEARCH FOR CASE IN T
        RELEASE MS:CJUL1,MS:PJUL1,MS

***** DETERMINE WHICH MONTH IT IS FOR

        DO CASE
           CASE $(MS:EDATE,1,2) = '0
                STORE 'JANUARY' TO M
           CASE $(MS:EDATE,1,2) = '0
                STORE 'FEBRUARY' TO
           CASE $(MS:EDATE,1,2) = '0
                STORE 'MARCH' TO MS:
           CASE $(MS:EDATE,1,2) = '0
                STORE 'APRIL' TO MS:
           CASE $(MS:EDATE,1,2) = '0
                STORE 'MAY' TO MS:MO
           CASE $(MS:EDATE,1,2) = '0
                STORE 'JUNE' TO MS:M
           CASE $(MS:EDATE,1,2) = '0
                STORE 'JULY' TO MS:M
           CASE $(MS:EDATE,1,2) = '0
                STORE 'AUGUST' TO MS
           CASE $(MS:EDATE,1,2) = '0
                STORE 'SEPTEMBER' TO
           CASE $(MS:EDATE,1,2) = '1
                STORE 'OCTOBER' TO M
           CASE $(MS:EDATE,1,2) = '1
                STORE 'NOVEMBER' TO
           CASE $(MS:EDATE,1,2) = '1
                STORE 'DECEMBER' TO
        ENDCASE

        STORE '19' + $(MS:OJUL,1,2)
        STORE '19' + $(MS:PJUL,1,2)
        STORE '19' + $(MS:CJUL,1,2)

        STORE MS:OCL1+MS:OCL2+MS:OCL
        STORE MS:OO1 + MS:OO2 + MS:O
        STORE MS:OO5+MS:OCL5 TO MS:O

        STORE MS:PCL1+MS:PCL2+MS:PCL
        STORE MS:PO1 + MS:PO2 + MS:P
        STORE MS:PO5+MS:PCL5 TO MS:P
```

```
         STORE MS:CCL1+MS:CCL2+MS:CCL3+MS:CCL4 TO MS:
         STORE MS:CO1 + MS:CO2 + MS:CO3 + MS:CO4 TO
         STORE MS:CO5+MS:CCL5 TO MS:CCASE

         STORE '0 TO 60 DAYS' TO MS:LBL1
         STORE '61 TO 120 DAYS' TO MS:LBL2
         STORE '121 TO 180 DAYS' TO MS:LBL3
         STORE '181 DAYS OR OVER' TO MS:LBL4
         STORE '            TOTALS:' TO MS:LBL5

SET FORMAT TO PRINT

         @ 2,25  SAY '      CODE 9142 TECHNICAL BRANCH'
         @ 3,25  SAY '      QUALITY DEFICIENT MATERIAL'
         @ 4,25  SAY '        MONTHLY STATUS REPORT  '
         @ 5,25  SAY '                THRU'
         @ 5,42  SAY $(MS:EDATE,1,2)+'/'+$(MS:EDATE,3,
                +'/'+$(MS:EDATE,5,2)
         @ 7,28  SAY '      JULIAN DATE   '
         @ 7,48  SAY MS:CJUL
         @ 9,27  SAY '          MONTH OF'
         @ 9,44  SAY MS:MONTH
         @ 10,42 SAY MS:OYR
         @ 11,25 SAY 'TOTAL CASES'
         @ 11,40 SAY MS:OCASE
         @ 13,10 SAY '                                    C
                 +'            OPEN'
         @ 15,15 SAY MS:LBL1
         @ 15,33 SAY MS:OCL1
         @ 15,48 SAY MS:OO1
         @ 17,15 SAY MS:LBL2
         @ 17,33 SAY MS:OCL2
         @ 17,48 SAY MS:OO2
         @ 19,15 SAY MS:LBL3
         @ 19,33 SAY MS:OCL3
         @ 19,48 SAY MS:OO3
         @ 21,15 SAY MS:LBL4
         @ 21,33 SAY MS:OCL4
         @ 21,48 SAY MS:OO4
         @ 22,15 SAY MS:LBL5
         @ 22,33 SAY MS:OCL5
         @ 22,48 SAY MS:OO5

***** DATA FOR THE SECOND YEAR OUTPUT

         @ 25,42 SAY MS:PYR
         @ 27,25 SAY 'TOTAL CASES'
         @ 27,40 SAY MS:PCASE
         @ 29,10 SAY '                                    C
                 +'            OPEN'
         @ 31,15 SAY MS:LBL1
         @ 31,33 SAY MS:PCL1
         @ 31,48 SAY MS:PO1
         @ 33,15 SAY MS:LBL2
         @ 33,33 SAY MS:PCL2
         @ 33,48 SAY MS:PO2
         @ 35,15 SAY MS:LBL3
         @ 35,33 SAY MS:PCL3
         @ 35,48 SAY MS:PO3
         @ 37,15 SAY MS:LBL4
         @ 37,33 SAY MS:PCL4
         @ 37,48 SAY MS:PO4
         @ 39,15 SAY MS:LBL5
         @ 39,33 SAY MS:PCL5
         @ 39,48 SAY MS:PO5

***** DATA FOR THE CURRENT YEAR OUTPUT
```

```
        @ 42,42 SAY MS:CYR
        @ 44,25 SAY 'TOTAL CASES'
        @ 44,40 SAY MS:CCASE
        @ 46,10 SAY '                                          CLOSED';
                +'          OPEN'
        @ 48,15 SAY MS:LBL1
        @ 48,33 SAY MS:CCL1
        @ 48,48 SAY MS:CO1
        @ 50,15 SAY MS:LBL2
        @ 50,33 SAY MS:CCL2
        @ 50,48 SAY MS:CO2
        @ 52,15 SAY MS:LBL3
        @ 52,33 SAY MS:CCL3
        @ 52,48 SAY MS:CO3
        @ 54,15 SAY MS:LBL4
        @ 54,33 SAY MS:CCL4
        @ 54,48 SAY MS:CO4
        @ 56,15 SAY MS:LBL5
        @ 56,33 SAY MS:CCL5
        @ 56,48 SAY MS:CO5
EJECT
***** SECOND PAGE OF REPORT

        @ 2,25 SAY '      CODE 9142 TECHNICAL BRANCH'
        @ 4,25 SAY '      QUALITY DEFICIENT MATERIAL'
        @ 6,25 SAY '        COMMAND KEY INDICATORS '
        @ 8,25 SAY '          AS OF'
        @ 8,42 SAY $(MS:EDATE,1,2) +'/'+$(MS:EDATE,3,2) +;
               '/'+$(MS:EDATE,5,2)
        @ 10,25 SAY 'CASES RECEIVED IN'
        @ 10,44 SAY MS:MONTH
        @ 10,62 SAY MS:CYR +':'
        @ 10,72 SAY MS:CRCVD
        @ 12,10 SAY '                                          CLOSED';
                +'          OPEN'
        @ 14,15 SAY MS:LBL1
        @ 14,33 SAY MS:CCL1
        @ 14,48 SAY MS:CO1
        @ 16,15 SAY MS:LBL2
        @ 16,33 SAY MS:CCL2
        @ 16,48 SAY MS:CO2
        @ 18,15 SAY MS:LBL3
        @ 18,33 SAY MS:CCL3
        @ 18,48 SAY MS:CO3
        @ 20,15 SAY MS:LBL4
        @ 20,33 SAY MS:CCL4
        @ 20,48 SAY MS:CO4
        @ 22,15 SAY MS:LBL5
        @ 22,33 SAY MS:CCL5
        @ 22,48 SAY MS:CO5

EJECT

***** THIRD PAGE OF REPORT

        @ 2,25 SAY '      CODE 9142 TECHNICAL BRANCH'
        @ 3,25 SAY '      QUALITY DEFICIENT MATERIAL'
        @ 4,25 SAY '        MONTHLY STATUS REPORT  '
        @ 5,25 SAY '             THRU'
        @ 5,42 SAY $(MS:EDATE,1,2) +'/'+$(MS:EDATE,3,2) +;
               '/'+$(MS:EDATE,5,2)
        @ 7,28 SAY '      JULIAN DATE  '
        @ 7,48 SAY MS:CJUL
        @ 9,27 SAY '         MONTH OF'
        @ 9,44 SAY MS:MONTH
        @ 12,20 SAY 'TOTAL RECORDS ON OPEN FILE:'
        @ 12,64 SAY MS:OPTOT - 1
        @ 14,20 SAY 'TOTAL RECORDS ON CLOSED FILES:'
        @ 14,65 SAY MS:CLTOT
```

```
                @ 16,20 SAY 'RECORDS WITH INVALID DATES, OPEN ';
                      +'FILE:'
                @ 16,64 SAY MS:OPERR - 1
                @ 18,20 SAY 'RECORDS WITH INVALID DATES, CLOSED';
                      +' FILE:'
                @ 18,65 SAY MS:CLERR
                @ 22,35 SAY 'END OF REPORT'
                SET ALTERNATE OFF
                SET ALTERNATE TO

        EJECT
        SET FORMAT TO SCREEN

                RELEASE ALL LIKE MS:*
        ERASE
        RETURN

        ***** END OF PROGRAM
```

XVIII. SORTED LISTING REPORT MENU

```
*****************************************************************
**                                                             **
**   DATE: 22 JANUARY 1984                                     **
**   VERSION: 1.0                                              **
**   MODULE NAME: SUPRPT2                                      **
**   MODULE PURPOSE: PROVIDE MENU OF SORTED LISTING            **
**                   REPORTS FOR THE SUPERVISOR                **
**                                                             **
**   MODULE INTERFACE DEFINITION                               **
**      INPUTS: C:WHO, C:JULIAN                                **
**      OUTPUTS: NONE                                          **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:                  **
**                                                             **
**        DISPLAYS MENU FOR SUPERVISOR TO CHOOSE DESIRED       **
**        REPORT. CAUSES REINDEXING OF APPROPRIATE FILE        **
**        TO PRODUCE CURRENT VALUES FOR REPORT GENERATION      **
**        RESULTS ARE STORED ON D: DRIVE AS A 'TXT' FILE       **
**        FOR LATER ACCESS. REPORT MAY BE PRINTED BY USING     **
**        'TYPE' FUNCTION OF OPERATING SYSTEM.                 **
**        PROCESSING SHOULD BE ACCOMPLISHED DURING 'OFF'       **
**        TIME PERIOD.                                         **
**                                                             **
**   SUPERORDINATE MODULES: SUPMENU1                           **
**   SUBORDINATE MODULES: SUPRPT1,SUPRPT2,SUPRPT3,SUPRPT4      **
**   AUTHOR: J.G. BOYNTON                                      **
**                                                             **
*****************************************************************

STORE T TO C:TRUE
DO WHILE C:TRUE
ERASE
*
STORE ' ' TO V:CHOICE
TEXT

           *****    SORTED LISTING REPORTS AVAILABLE    *****


                   1 - OPEN FILE BY CASE AND ANALYST
                   2 - OPEN FILE BY ITEM MGR AND ANALYST
                   3 - OPEN FILE BY COG, SMIC, OPEN DATE
                   4 - CLOSED FILE BY CREDIT CODE, CASE
                   5 - EXIT


ENDTEXT
@ 19,40 GET V:CHOICE
READ
*
    IF V:CHOICE >='1' .AND. V:CHOICE < '5'
        ERASE
        @ 12,20 SAY ' THESE REPORTS WILL TAKE SOME TIME TO'
        @ 13,20 SAY ' GENERATE. IF YOU DECIDE TO CONTINUE'
        @ 14,20 SAY ' THE TERMINAL MAY NOT BE USED FOR ANY'
        @ 15,20 SAY ' OTHER PROCESSING UNTIL AFTER ';
                +'COMPLETION '
        @ 23,15 SAY 'PRESS  1 - TO ABORT, ANY OTHER KEY TO';
                +'       CONTINUE'
        WAIT TO V:BAIL
        IF V:BAIL ='1'
            RELEASE ALL LIKE V:*
            RELEASE C:TRUE
            RETURN
        ENDIF
    DO CASE
       CASE V:CHOICE = '1'
***** FILE D:SUPRPT1.TXT IS CREATED TO PROVIDE THE REPORT
***** D:SUPRPT1.NDX IS INDEXED ON WHO+CASE
              RELEASE ALL LIKE V:*
              USE D:OPEN1 INDEX D:SUPRPT1
              REINDEX
              GOTO TOP
              SKIP
              SET TALK OFF
              STORE 0 TO P:COUNT
              STORE 0 TO P:TOTAL
              SET FORMAT TO SCREEN
              ERASE
              SET ALTERNATE TO D:SUPRPT1
              SET ALTERNATE ON
              ?      'DATE: ',DATE()
              ?
              ?      '                                   ':
              +'                             *****    ':
              +'QDR OPEN FILE BY ANALYST & CASE    ***** '
              ?
              ?      '                           NSN / PART':
              +'                                     UNIT':
              +'     QTY           EXT    9             D':
              +'                         OPEN    SCREENING'
              ?      '   CASE':
              +' COG   SM  FSC NATO FIIN ':
              +'                CAT    NOMEN       UIC   ':
              +' UI        PRICE                   DEFNT ':
              +'        PRICE     Q   ORG     DF   C     ':
              +'         CONTRACT NUMBER     DATE   CODE/DATE '
              ?
              STORE 0 TO P:PAGE
              STORE 5 TO ROW
              DO WHILE  .NOT. EOF
                  STORE P:TOTAL+1 TO P:TOTAL
                      ? '  ',CASE,' ',COG,' ',SM,' ',NSN,' ':
                      ,CAT,' ',$(NOMEN,1,9),' ',UIC,' ',UI,:
                      ' ',UPRC,' ',QTYDEF,' ',EPRC,' ',O9Q:
                      ,' ',ORG,' ',DEF,' ',DOC,' ',NUM,' ':
                      $(DATES,11,5),' ',SCR,'/',$(DATES,21,5)
                      STORE ROW+1 TO ROW
                      SKIP
                      STORE P:COUNT+1 TO P:COUNT
                      IF ROW > 60
                          ERASE
                          ? CHR(12)
                          STORE 0 TO ROW
                          STORE P:PAGE+1 TO P:PAGE
                          ?
                          ?
                          ? '     PAGE  ',P:PAGE
                          ?
                          ?    '                          ':
                          +' NSN / PART':
                          +'                            ':
                          +'               UNIT         ':
                          +'QTY                         ':
                          +'          EXT    9          ':
                          +'                            ':
                          +' D                    OPEN  ':
                          +'SCREENING'
                          ?    '    CASE':
```

```
                          +'             COG   SM   ';
                          +' FSC                      ';
                          +'NATO FIIN  CAT    NOMEN   ';
                          +'UIC                      ';
                          +'UI        PRICE      DEFNT  ';
                          +'                          ';
                          +'PRICE     Q   ORG     DF    C ';
                          +'CONTRACT NUMBER    DATE   CODE';
                          +'/DATE '
                          ?
                          STORE ROW+4 TO ROW
                      ENDIF <PAGE IS FULL>
              ENDDO
              ?
              ?
              ?
              ?
              ?   '     TOTAL CASES:',P:TOTAL
              ?
              ?
              ?   '  *****************************      ';
              +'END OF OPEN FILE REPORT BY ANALYST & CASE';
              +'    **********************************'
              ? CHR(12)
              SET ALTERNATE TO
              ? CHR(7)
              ? CHR(7)
              ERASE
              @ 12,20 SAY ' YOU MAY RECEIVE YOUR COG,OPEN';
                         +' FILE REPORT ON'
              @ 13,20 SAY '             D:SUPRPT1.TXT  '
              @ 20,20 SAY '     PRESS ANY KEY TO CONTINUE'
              WAIT
       CASE V:CHOICE = '2'

***** FILE D:SUPRPT2.TXT IS CREATED TO PROVIDE THE REPORT
***** D:SUPRPT2.NDX IS INDEXED ON ACTPT+WHO

              RELEASE ALL LIKE V:*
              USE D:OPEN1 INDEX D:SUPRPT2
              REINDEX
              GOTO TOP
              SKIP
              SET TALK OFF
              STORE 0 TO P:COUNT
              STORE 0 TO P:TOTAL
              SET FORMAT TO SCREEN
              ERASE
              SET ALTERNATE TO D:SUPRPT2
              SET ALTERNATE ON
              ?      'DATE: ',DATE()
              ?
              ?      '                                ';
              +'                           *****     CDR';
              +' OPEN FILE BY                ITEM MANAGER &';
              +' ANALYST       ***** '
              ?
              ?      '                         NSN / PART';
              +'                                       ';
              +'                             -         ';
              +'          UNIT                        QTY ';
              +'           EXT    9                D      ';
              +'                                OPEN     ';
              +'SCREENING'
              ?      '    CASE';
              +'             COG    SM   FSC NATO FIIN ';
              +'               CAT     NOMEN      UIC    ';
              +'UI         PRICE            DEFNT       ';
              +'     PRICE     Q    ORG     DF    C     ';
+'     CCNTRACT NUMBER      DATE    CODE/DATE '
?
STORE 0 TO P:PAGE
STORE 5 TO ROW
DO WHILE  .NOT. EOF
     STORE P:TOTAL+1 TO P:TOTAL
          ? '  ',CASE,' ',COG,' ',SM,' ',[illegible];
          ' ',CAT,' ',$(NOMEN,1,9),'  ',UIC,;
          ' ',UI,' ',UPRC,'  ',QTYDEF,'  ',;
          EPRC,' ',O9Q,' ',ORG,' ',DEF,' ',DOC,;
          ' ',NUM,' ',$(DATES,11,5),' ',SCR,'/';
          ,$(DATES,21,5)
          STORE ROW+1 TO ROW
          SKIP
          STORE P:COUNT+1 TO P:COUNT
          IF ROW > 60
               ERASE
               ? CHR(12)
               STORE 0 TO ROW
               STORE P:PAGE+1 TO P:PAGE
               ?
               ?
               ? '      PAGE  ',P:PAGE
               ?
               ?      '                             ';
               +' NSN / PART';
               +'                             ';
               +'                  UNIT          Q';
               +'TY                                ';
               +'          EXT     9               ';
               +'                        D         ';
               +'              OPEN   SCREENING'
               ?      '     CASE';
               +'                         COG    SM  ';
               +'FSC        NATO FIIN  CAT     NCM';
               +'EN           UIC                   ';
               +' UI            PRICE        DEFNT  ';
               +'     PRICE       Q   ORG       DF  ';
               +'C   CONTRACT NUMBER      DATE     ';
               +'CODE/DATE '
               ?
               STORE ROW+4 TO ROW
          ENDIF <PAGE IS FULL>
ENDDO
?
?
?
?
?     '       TOTAL CASES:',P:TOTAL
?
?
?
?     '   ******************************     ';
+'END CF OPEN FILE REPORT BY ITEM MANAGER &';
+'ANALYST   **********************************'
? CHR(12)
SET ALTERNATE TO
? CHR(7)
? CHR(7)
ERASE
@ 12,20 SAY ' YOU MAY RECEIVE YOUR COG,OPEN';
        +'  FILE REPORT ON'
@ 13,20 SAY '                  D:SUPRPT2.TXT  '
@ 20,20 SAY '      PRESS ANY KEY TO CONTINUE'
WAIT
     CASE V:CHOICE = '3'

***** FILE D:SUPRPT3.TXT IS CREATED TO PROVIDE THE REPORT
***** D:SUPRPT3.NDX IS INDEXED ON COG+SM+$(DATES,11,5)+CASE
```

```
RELEASE ALL LIKE V:*
USE D:OPEN1 INDEX D:SUPRPT3
REINDEX
GOTO TOP
SKIP
SET TALK OFF
STORE 0 TO P:COUNT
STORE 0 TO P:TOTAL
SET FORMAT TO SCREEN
ERASE
SET ALTERNATE TO D:SUPRPT3
SET ALTERNATE ON
?     'DATE: ',DATE()
?
?     '                                            ';
+'          *****           QDR OPEN FILE BY ';
+'COG,SMIC,OPEN DATE & CASE       ***** '
?
?     '                              NSN / PART';
+'                                           ';
+'                                       UNIT';
+'      QTY          EXT     9             ';
+'  D   OPEN     SCREENING'
?     '   CASE';
+'                    COG    SM   FSC NATO FIIN ';
+'  CAT     NOMEN         UIC      UI       PRIC';
+'E         DEFNT          PRICE      Q    ORG  ';
+' DF    C CONTRACT NUMBER       DATE     CODE/';
+'DATE '
?
STORE 0 TO P:PAGE
STORE 5 TO ROW
DO WHILE  .NOT. EOF
    STORE P:TOTAL+1 TO P:TOTAL
        ? '  ',CASE,' ',COG,' ',SM,' ',NSN,;
        ' ',CAT,' ',$(NOMEN,1,9),'  ',UIC,' ';
        ,UI,' ',UPRC,' ',QTYDEF,'  ',EPRC,;
        ' ',O9Q,' ',ORG,' ',DEF,' ',DOC,' ';
        ,NUM,' ',$(DATES,11,5),' ',SCR,'/',;
        $(DATES,21,5)
        STORE ROW+1 TO ROW
        SKIP
        STORE P:COUNT+1 TO P:COUNT
        IF ROW > 60
            ERASE
            ? CHR(12)
            STORE 0 TO ROW
            STORE P:PAGE+1 TO P:PAGE
            ?
            ?
            ? '     PAGE  ',P:PAGE
            ?
            ?     '                          ';
            +'NSN / PART';
            +'                           ';
            +'                   UNIT    ';
            +'  QTY              EXT    9    ';
            +'                 D        ';
            +'     OPEN    SCREENING'
            ?     '  CASE';
            +'                   COG    SM   FS';
            +'C NATO FIIN  CAT    NOMEN     ';
            +'  UIC      UI       PRICE     ';
            +'DEFNT           PRICE      Q   OR';
            +'G       DF            C  CONTRAC';
            +'T  NUMBER     DATE    CODE/DATE '
            ?
            STORE ROW+4 TO ROW
        ENDIF <PAGE IS FULL>
```

```
              ENDDO
              ?
              ?
              ?
              ?
              ?    '      TOTAL CASES:',P:TOTAL
              ?
              ?
              ?    '   *****************************    E';
              +'ND OF OPEN FILE REPORT BY COG,SMIC,OPEN ';
              +'DATE & CASE  ******************************';
              +'*****'
              ? CHR(12)
              SET ALTERNATE TO
              ? CHR(7)
              ? CHR(7)
              ERASE
              @ 12,20 SAY ' YOU MAY RECEIVE YOUR COG,OPEN';
              +'FILE REPORT ON'
              @ 13,20 SAY '               D:SUPRPT3.TXT  '
              @ 20,20 SAY '      PRESS ANY KEY TO CONTINUE'
              WAIT

    CASE V:CHOICE = '4'

***** FILE D:SUPRPT4.TXT IS CREATED TO PROVIDE THE REPORT
***** D:SUPRPT4.NDX IS INDEXED ON CR+CASE

              RELEASE ALL LIKE V:*
              USE D:CLOSE1 INDEX D:SUPRPT4
              REINDEX
              GOTO TCP
              SKIP
              SET TALK OFF
              STCRE 0 TO P:COUNT
              STORE 0 TO P:TOTAL
              SET FORMAT TO SCREEN
              ERASE
              SET ALTERNATE TO D:SUPRPT4
              SET ALTERNATE ON
              ?      'DATE: ',DATE()
              ?
              ?      '
                           *****       QDR CLOSED FILE BY ';
              +'CREDIT CODE & CASE     ***** '
              ?
              ?      '                            NSN / PART';
              +'                                          ';
              +'                                       UNIT';
              +'     QTY               EXT    9            ';
              +'  D   OPEN    SCREENING'
              ?      '  CASECOG   SM  FSC NATO FIIN  ';
              +'  CAT    NOMEN        UIC     UI        PRIC';
              +'E        DEFNT          PRICE     Q   CRG   ';
              +' DF   C CONTRACT NUMBER     DATE     CODE/';
              +'DATE '
              ?
              STORE C TO P:PAGE
              STCRE 5 TO ROW
              DO WHILE  .NOT. EOF
                  STCRE P:TOTAL+1 TO P:TOTAL
                      ? '  ',CASE,' ',COG,' ',SM,' ',NSN,;
                      ' ',CAT,' ',$(NOMEN,1,9),'  ',UIC,' ';
                      ,UI,' ',UPRC,'  ',QTYDEF,'  ',EPRC,;
                      ' ',O9Q,' ',ORG,' ',DEF,' ',DOC,' ';
                      ,NUM,' ',$(DATES,11,5),' ',SCR,'/',;
                      $(DATES,21,5)
                      STORE ROW+1 TO ROW
                      SKIP
```

```
                                 STORE P:COUNT+1 TO P:COUNT
                                 IF ROW > 60
                                     ERASE
                                     ? CHR(12)
                                     STORE 0 TO ROW
                                     STORE P:PAGE+1 TO P:PAGE
                                     ?
                                     ?
                                     ? '      PAGE  ',P:PAGE
                                     ?
                                     ?      '                         ';
                                     +'NSN / PART';
                                     +'                              ';
                                     +'                     UNIT     ';
                                     +'  QTY              EXT     9  ';
                                     +'                D             ';
                                     +'     OPEN    SCREENING'
                                     ?      '   CASE   COG     SM    FS';
                                     +'C NATO FIIN  CAT     NOMEN    ';
                                     +'  UIC       UI        PRICE   ';
                                     +'DEFNT            PRICE     C   OR';
                                     +'G       DF             C  CONTRAC';
                                     +'T  NUMBER     DATE    CODE/DATE '
                                     ?
                                     STORE ROW+4 TO ROW
                                 ENDIF <PAGE IS FULL>
                         ENDDO
                         ?
                         ?
                         ?
                         ?
                         ?    '       TOTAL CASES:',P:TOTAL
                         ?
                         ?
                         ?    '   ******************************   ';
                         +' END OF CLOSED FILE REPORT BY CREDIT CODE';
                         +' & CASE  ********************************'
                         ? CHR(12)
                         SET ALTERNATE TO
                         ? CHR(7)
                         ? CHR(7)
                         ERASE
                         @ 12,20 SAY ' YOU MAY RECEIVE YOUR REPORT BY';
                                 +'  CREDIT CODE & CASE ON'
                         @ 13,20 SAY '                D:SUPRPT4.TXT  '
                         @ 20,20 SAY '       PRESS ANY KEY TO CONTINUE'
                         WAIT
                   CASE V:CHOICE = '5'
                        RELEASE ALL LIKE V:*
                        RELEASE C:TRUE
                        RETURN
              ERASE
              ENDCASE

          ELSE
              IF V:CHOICE='5'
                  RELEASE ALL LIKE V:*
                  RELEASE C:TRUE
                  RETURN
              ELSE

                  ?  '                PLEASE ANSWER WITH A 1 - 5 ONLY'
                  ?
                  ? '                    PRESS ANY KEY TO CONTINUE'
                  ?
                  WAIT
              ENDIF
          ENDIF <V:CHOICE>
          ENDDO <C:TRUE>
```

```
RELEASE ALL LIKE V:*
RELEASE C:TRUE
RETURN

***** END OF PROGRAM
```

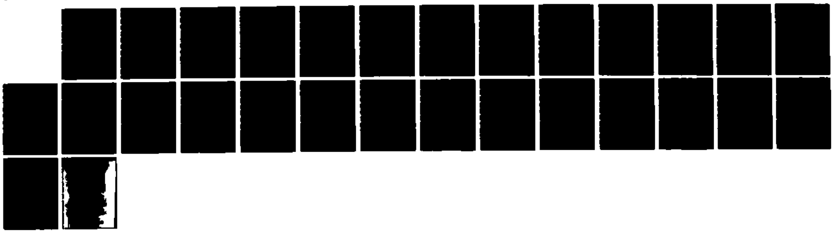
XIX. CASE REASIGNMENT MODULE

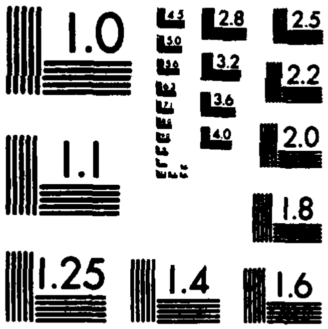
```
*************************************************************
**                                                         **
**   DATE: 22 JANUARY 1984                                 **
**   VERSION: 1.0                                          **
**   MODULE NAME: C-REASGN                                 **
**   MODULE PURPOSE: REASSIGN CASE FROM ONE ANALYST TO     **
**                ANOTHER                                  **
**   MODULE INTERFACE DEFINITION                           **
**      INPUTS: C:WHO, C:JULIAN                            **
**      OUTPUTS:                                           **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:              **
**                                                         **
**      RECEIVES THE CASE NUMBER AND TWO ANALYSTS TO BE    **
**      INVOLVED IN THE TRANSFER. BEFORE TRANSFERING CASE  **
**      THE DATABASE IS CHECKED TO INSURE UPDATE OF        **
**      ANALYST STATISTICS. RETURNS FOR ANOTHER CASE TO    **
**      BE ASSIGNED OF FOR TERMINATION OF PROGRAM.         **
**                                                         **
**   SUPERORDINATE MODULES: UTILMENU                       **
**   SUBORDINATE MODULES: XDBHNDLR                         **
**   AUTHOR: J.G. BOYNTON                                  **
**                                                         **
*************************************************************

STORE T TO R:CONTINUE
DO WHILE R:CONTINUE
   ERASE
   @ 6,24 SAY '***** CASE RE-ASSIGNMENT PROCESSING *****'
   @ 9,28 SAY '1 - RE-ASSIGN CASE TO ANOTHER ANALYST'
   @ 10,28 SAY '2 - RETURN TO UTILITY MENU'
   STORE ' ' TO R:REPLY
   @ 15,40 GET R:REPLY
   READ
   DO WHILE R:REPLY < '1' .OR. R:REPLY > '2'
      @ 23,32 SAY 'ENTER 1 - 2 ONLY' + CHR(7)
      @ 15,40 GET R:REPLY
      READ
   ENDDO
   DO CASE
      CASE R:REPLY = '2'
         RELEASE ALL LIKE R:*
         RETURN
      CASE R:REPLY = '1'
         STORE '       ' TO R:CASE
         ERASE
         @ 6,24 SAY 'ENTER DATA FOR CASE BEING RE-ASSIGNED'
         @ 9,32 SAY 'CASE NUMBER  ' GET R:CASE ;
                PICTURE '999999X'
         READ
         STORE !(R:CASE) TO R:CASE
         STORE R:CASE TO M:KEY
         STORE '1E' TO M:TYPE
         DO XDBHNDLR.PRG
         IF M:TYPE ='1'
            @ 20,20 SAY 'CASE IS CURRENTLY LOCKED' + CHR(7)
            @ 22,20 SAY ' PRESS ANY KEY TO CONTINUE'
            WAIT
         ENDIF
         IF M:TYPE<> '1'
            IF M:TYPE = '9'
               @ 22,14 SAY 'CASE DOES NOT EXIST IN OPEN';
```

```
                      +'FILE - STRIKE ANY KEY TO CONTINUE';
                         + CHR(7)
                WAIT
             ELSE
                STORE '      ' TO R:NEW
                STORE ' ' TO R:REPLY
                DO WHILE R:REPLY
                   @ 11,10 SAY 'CASE NUMBER  '+  M:CASE
                   @ 11,32 SAY 'NSN   ' + $(M:NSN,1,4)+'-';
                           +$(M:NSN,5,2)+'-'+$(M:NSN,7,3);
                           +'-'+$(M:NSN,10,4)
                   @ 11,55 SAY 'COG ' + M:COG
                   @ 11,62 SAY 'CAT  ' + M:CAT
                   @ 14,10 SAY 'CURRENTLY ASSIGNED TO ' :
                           + M:WHO
                   @ 15,10 SAY 'RE-ASSIGN TO           ';
                           GET R:NEW
                   READ
                   STORE ' ' TO R:REPLY
                   DO WHILE R:REPLY <'1' .OR. R:REPLY >'3'
                       @ 21,20 SAY '1 - RE-ASSIGN ';
                               +' 2 - CHANGE  3 - EXIT'
                       @ 23,20 SAY '                  ';
                               GET R:REPLY
                       READ
                   ENDDO
                   IF R:REPLY ='3'
                       STORE '1G' TO M:TYPE
                       DO XDBHNDLR.PRG
                       RELEASE ALL EXCEPT C:*
                       RETURN
                   ENDIF
                   IF $(M:DATES,46,1)='*'
*                       DO STATISTICS UPDATE PROGRAM
                   ENDIF
                   IF R:REPLY='1'
                       ERASE
                       @ 10,20 SAY '***** PLEASE ';
                               +'STANDBY *****'
                       @ 12,20 SAY 'CASE NUMBER   ' + M:CASE
                       @ 13,20 SAY 'IS BEING RE-ASSIGNED '
                       @ 15,20 SAY ' FROM    ' + M:WHO
                       @ 16,20 SAY ' TO      ' + R:NEW
                       @ 22,18 SAY ' *****  DO NOT ';
                               +'INTERRUPT *****'
                       USE D:OPEN1 INDEX D:OCASE1,D:ONSN
                       STORE R:NEW TO M:WHO
                       STORE '1C' TO M:TYPE
                       DO XDBHNDLR.PRG
                       STORE M:CASE TO R:CASE
                       RELEASE ALL LIKE M:*
                       STORE R:CASE TO M:KEY
                       STORE '2E' TO M:TYPE
                       DO XDBHNDLR.PRG
                       STORE '2C'TO M:TYPE
                       STORE R:NEW TO M:WHO
                       DO XDBHNDLR.PRG
                       RELEASE ALL LIKE M:*
                       ERASE
                       STORE F TO R:REPLY
                    ENDIF
                ENDDO <R:REPLY>
         ENDIF
  ENDCASE
ENDDO <CONTINUE>

***** END OF PROGRAM
```

AD-A143 875 THE CREATION OF A CENTRAL DATABASE ON A MICROCOMPUTER NETWORK(U) NAVAL POSTGRADUATE SCHOOL MONTEREY CA J G BOYNTON ET AL. MAR 84 3/3

UNCLASSIFIED F/G 9/2 NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

XX. ITEM MANAGER FILE UPDATE

```
***************************************************************
**                                                           **
**   DATE: 12 JAN 84                                         **
**   VERSION: 1.0                                            **
**   MODULE NAME: ADDRUPDT                                   **
**   MODULE PURPOSE: ADD, UPDATE, OR DELETE ITEM MANAGER     **
**                   ADDRESS RECORDS                         **
**                                                           **
**   MODULE INTERFACE DEFINITION                             **
**      INPUTS: NONE                                         **
**      OUTPUTS: NONE                                        **
**                                                           **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:                **
**                                                           **
**         ALLOWS THE ADDITION, DELETION, OR UPDATING        **
**         OF ITEM MANAGER ADDRESS RECORDS.  ACCEPTS THE     **
**         ITEM MANAGER CODE, VALIDATES THE EXISTENCE OF     **
**         AN IM WHEN CREATING NEW RECORDS, ALLOWS THE       **
**         RECALL OF PREVIOUSLY DELETED RECORDS DURING       **
**         UPDATE, AND VERIFIES THAT NO ACTIVE COGS          **
**         ARE ASSIGNED TO A RECORD BEING DELETED.           **
**                                                           **
**   SUPERORDINATE MODULES: UTILMENU                         **
**   SUBORDINATE MODULES: NONE                               **
**   AUTHOR: R. G. NICHOLS                                   **
**                                                           **
***************************************************************

STORE T TO A:CONTINUE
DO WHILE A:CONTINUE

*****  DISPLAY SELECTION OPTIONS AND ACCEPT CHOICE
   ERASE
   @  6,18 SAY '***** ITEM MANAGER ADDRESS PROCESSING *****'
   @  9,28 SAY '1 - ADD ADDRESS'
   @ 10,28 SAY '2 - UPDATE ADDRESS'
   @ 11,28 SAY '3 - DELETE ADDRESS'
   @ 12,28 SAY '4 - RETURN TO UTILITY MENU'
   STORE ' ' TO A:REPLY
   @ 15,40 GET A:REPLY PICTURE '9'
   READ

*****  VALIDATE RESPONSE

   DO WHILE A:REPLY < '1' .OR. A:REPLY > '4'
      @ 23,32 SAY 'ENTER 1 - 4 ONLY' + CHR(7)
      @ 15,40 GET A:REPLY PICTURE '9'
      READ
   ENDDO
   DO CASE

*****  IF CHOICE IS QUIT, RELEASE ALL LOCAL MEMORY VARIABLES
*****  AND RETURN TO CALLING PROGRAM

      CASE A:REPLY = '4'
         RELEASE ALL LIKE A:*
         RETURN

*****  IF CHOICE IS ADD, PROMPT FOR ITEM MANAGER BEING ADDED

      CASE A:REPLY = '1'
```

```
          STCRE '        ' TO A:IM
          ERASE
          @ 6,20 SAY 'ENTER DATA FOR ITEM MANGER BEING ADDED'
          @ 9,32 SAY 'ITEM MANAGER ' GET A:IM
          READ
          STCRE !(A:IM) TO A:IM
          SELECT PRIMARY
          USE D:ADDRESS INDEX D:IM

*****   CHECK FOR EXISTING IM RECORD

          FIND &A:IM
          IF # <> 0
             @ 22,14 SAY 'RECORD CURRENTLY EXISTS -';
                  + 'STRIKE ANY KEY TO CONTINUE' + CHR(7)
             WAIT
          ELSE
             STORE '                    ' TO A:TITLE
             STORE '                              ';
                 + '           ' TO A:COMMAND
             STORE '                              ';
                 + '           ' TO A:COMMAND2
             STORE '               ' TO A:ATTN
             STORE '                    ' TO A:STREET
             STORE '                    ' TO A:CITY
             STORE '  ' TO A:STATE
             STORE '     ' TC A:ZIP

*****   PROMPT FOR AND ACCEPT NEW IM DATA

             @ 14,16 SAY 'TITLE      ' GET A:TITLE
             @ 15,16 SAY 'COMMAND    ' GET A:COMMAND
             @ 16,16 SAY 'COMMAND 2  ' GET A:COMMAND2
             @ 17,16 SAY 'ATTN       ' GET A:ATTN
             @ 18,16 SAY 'STREET     ' GET A:STREET
             @ 19,16 SAY 'CITY ' GET A:CITY
             @ 19,44 SAY ' STATE ' GET A:STATE
             @ 19,56 SAY 'ZIP CODE ' GET A:ZIP ;
                                 PICTURE '99999'
             READ

*****   VERIFY POST OR EXIT

             @ 21,20 SAY '1 - POST NEW RECORD           ';
                   + '  2 - EXIT'
             STORE ' ' TO A:REPLY3
             @ 23,40 GET A:REPLY3 PICTURE '9'
             READ
             DO WHILE A:REPLY3 < '1' .OR. A:REPLY3 > '2'
                @ 23,40 GET A:REPLY3
                READ
             ENDDO

*****   CREATE NEW IM RECORD

             IF A:REPLY3 = '1'
                APPEND BLANK
                REPLACE IM WITH !(A:IM),TITLE WITH ;
!(A:TITLE),COMMAND WITH !(A:COMMAND),COMMAND2 WITH;
 !(A:CCMMAND2),ATTN WITH !(A:ATTN),STREET WITH !(A:STREET),;
CITY WITE !(A:CITY),STATE WITH !(A:STATE),ZIP WITH A:ZIP
             ENDIF
          ENDIF

*****   IF CHOICE IS UPDATE

        CASE A:REPLY = '2'
          STORE '        ' TO A:IM
```

```
*****  REQUEST FOR AND ACCEPT IM TO BE UPDATED
          ERASE
          @ 6,19 SAY 'ENTER DATA FOR ITEM MANGER BEING ';
                + 'UPDATED'
          @ 9,32 SAY 'ITEM MANAGER ' GET A:IM
          READ
          STORE !(A:IM) TO A:IM
          SELECT PRIMARY

*****  RETREIVE IM RECORD BEING UPDATED

          USE D:ADDRESS INDEX D:IM
          FIND &A:IM
          IF # <> 0
             @ 22,17 SAY 'RECORD NOT FOUND ';
                + '- STRIKE ANY KEY TO CONTINUE'+CHR(7)
             WAIT
          ELSE
             STORE T TO A:PROCESS

*****  IF RECORD DELETED, PROMPT FOR REACTIVATION OPTION

             IF *
                STORE ' ' TO A:REPLY2
                @ 18,22 SAY 'RECORD HAS BEEN MARKED FOR ';
                      + 'DELETION'
                @ 19,17 SAY 'DO YOU WANT THIS RECORD ';
                      + 'REACTIVATED <Y OR N>'
                @ 21,40 GET A:REPLY2 PICTURE 'A'
                READ
                DO WHILE A:REPLY2<>'Y' .AND. A:REPLY2<>'N'
                   @ 23,31 SAY 'ENTER Y OR N ONLY' +CHR(7)
                   @ 21,40 GET A:REPLY2 PICTURE 'A'
                   READ
                ENDDO

*****  IF REACTIVATION REQUESTED

                IF !(A:REPLY2) = 'Y'
                   @ 18,22 SAY '                                   ';
                         + '          '
                   @ 19,17 SAY '                                   ';
                         + '                  '
                   @ 21,40 SAY ' '
                   RECALL
                ELSE
                   STORE F TO A:PROCESS
                ENDIF
             ENDIF

*****  PROMPT FOR AND ACCEPT UPDATE INFORMATION

             DO WHILE A:PROCESS
                STORE TITLE TO A:TITLE
                STORE COMMAND TO A:COMMAND
                STORE COMMAND2 TO A:COMMAND2
                STORE ATTN TO A:ATTN
                STORE STREET TO A:STREET
                STORE CITY TO A:CITY
                STORE STATE TO A:STATE
                STORE ZIP TO A:ZIP
                @ 14,16 SAY 'TITLE      ' GET TITLE
                @ 15,16 SAY 'COMMAND    ' GET COMMAND
                @ 16,16 SAY 'COMMAND2   ' GET COMMAND2
                @ 17,16 SAY 'ATTN       ' GET ATTN
                @ 18,16 SAY 'STREET     ' GET STREET
                @ 19,16 SAY 'CITY ' GET CITY
                @ 19,44 SAY ' STATE ' GET STATE
                @ 19,56 SAY 'ZIP CODE ' GET ZIP ;
```

```
                              PICTURE '99999'
                READ
                @ 21,20 SAY '1 - POST UPDATED RECORD ';
                  +  '          2 - EXIT'
                STORE ' ' TO A:REPLY3
                @ 23,40 GET A:REPLY3 PICTURE '9'

*****    PROVIDE UPDATE/EXIT OPTION

                READ
                DO WHILE A:REPLY3 < '1' .OR. A:REPLY3 > '2'
                   @ 23,40 GET A:REPLY3
                   READ
                ENDDO

*****    IF UPDATE

                IF A:REPLY3 <> '1'
                   REPLACE IM WITH !(A:IM),TITLE WITH :
!(A:TITLE),COMMAND WITH !(A:COMMAND),COMMAND2 WITH :
!(A:COMMAND2),ATTN WITH !(A:ATTN),STREET WITH !(A:STREET),:
 CITY WITH !(A:CITY), ZIP WITH A:ZIP
                ENDIF
                STORE F TO A:PROCESS
             ENDDO
          ENDIF

*****    IF CHOICE IS DELETE

       CASE A:REPLY = '3'
          STORE '          ' TO A:IM

*****    PROMPT FOR AND ACCEPT IM BEING DELETED

          ERASE
          @ 6,19 SAY 'ENTER DATA FOR ITEM MANGER BEING ';
                  + 'DELETED'
          @ 9,32 SAY 'ITEM MANAGER ' GET A:IM
          READ
          STORE !(A:IM) TO A:IM
          SELECT PRIMARY
          USE D:ADDRESS INDEX D:IM

*****    RETRIEVE RECORD BEING DELETED

          FIND &A:IM
          IF # <> 0
             @ 22,17 SAY 'RECORD NOT FOUND ';
                  + '- STRIKE ANY KEY TO CONTINUE'+CHR(7)
             WAIT
          ELSE

*****    IF ACTIVE COGS ARE ASSIGNED, DO NOT ALLOW DELETE

             IF COUNT > 0
                @ 11,16 SAY 'TITLE      ' + TITLE
                @ 12,16 SAY 'COMMAND    ' + COMMAND
                @ 13,16 SAY 'COMMAND 2  ' + COMMAND2
                @ 14,16 SAY 'ATTN       ' + ATTN
                @ 15,16 SAY 'STREET     ' + STREET
                @ 16,16 SAY 'CITY '+CITY-' STATE '+STATE+;
                            '  '+'ZIP CODE ' + ZIP
                @ 18,20 SAY 'ACTIVE COGS EXIST FOR THIS ';
                          + 'ITEM MANAGER'
                @ 19,15 SAY 'ALL ACTIVE COGS MUST BE ';
                          + 'REASSIGNED TO ANOTHER I.M.'
                @ 20,21 SAY 'BEFORE DELETE ACTION CAN BE';
                          + ' COMPLETED'
                @ 22,27 SAY 'STRIKE ANY KEY TO CONTINUE';
```

```
                         + CHR(7)
               WAIT
            ELSE

*****  IF PREVIOUSLY DELETED, NOTIFY OPERATOR

               IF *
                  @ 23,13 SAY 'RECORD PREVIOUSLY DELETED ';
                     + '- STRIKE ANY KEY TO CONTINUE'+CHR(7)
                  WAIT
               ELSE
                  @ 11,16 SAY 'TITLE       ' + TITLE
                  @ 12,16 SAY 'COMMAND     ' + COMMAND
                  @ 13,16 SAY 'COMMAND 2   ' + COMMAND2
                  @ 14,16 SAY 'ATTN        ' + ATTN
                  @ 15,16 SAY 'STREET      ' + STREET
                  @ 16,16 SAY 'CITY '+CITY-' STATE '+STATE;
                              -'   '+'ZIP CODE ' + ZIP
                  @ 19,20 SAY '1 - DELETE THIS ITEM MANAGER
                            + '       2 - EXIT'
                  STORE ' ' TO A:REPLY2
                  @ 21,40 GET A:REPLY2 PICTURE '9'

*****  ACCEPT DELETE/EXIT OPTION

                  READ
                  DO WHILE A:REPLY2 < '1' .OR. A:REPLY2 > '2'
                     @ 23,40 GET A:REPLY2
                     READ
                  ENDDO

*****  IF DELETE REQUESTED

                  IF A:REPLY2 = '1'
                     DELETE
                  ENDIF
               ENDIF
            ENDIF
         ENDIF
   ENDCASE
   USE
ENDDO

***** END OF PROGRAM
```

XXI. COG FILE UPDATE MODULE

```
***********************************************************************
**                                                                   **
**   DATE: 18 JAN 1984                                               **
**   VERSION: 1.0                                                    **
**   MODULE NAME: COGUPDT                                            **
**   MODULE PURPOSE: ALLOWS ADDITION, DELETION, OR                   **
**                   UPDATING OF COG FILE                            **
**                                                                   **
**   MODULE INTERFACE DEFINITION                                     **
**      INPUTS: NONE                                                 **
**      OUTPUTS: NONE                                                **
**                                                                   **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:                        **
**                                                                   **
**         ACCEPTS NEW COG DATA, VERIFIES THAT THE NEW               **
**         COG IS NOT A DUPLICATE, AND VERIFIES THE                  **
**         EXISTENCE OF AN ITEM MANAGER RECORD.  ACCEPTS             **
**         UPDATE INFORMATION ON COG-ITEM MANAGER ASSIGN-            **
**         MENTS, VALIDATES THE EXISTENCE OF AN ITEM                 **
**         MANAGER RECORD, AND UPDATES THE COG FILE.                 **
**         PREVIOUSLY DELETED COGS MAY BE REACTIVATED                **
**         WITH THE UPDATE OPTION.  ACCEPTS THE COG TO               **
**         BE DELETED, VERIFIES THE RECORDS EXISTENCE,               **
**         AND VERIFIES THAT NO ACTIVE CASES EXIST FOR               **
**         THIS COG.                                                 **
**                                                                   **
**   SUPERORDINATE MODULES: UTILMENU                                 **
**   SUBORDINATE MODULES: NONE                                       **
**   AUTHOR: R. G. NICHOLS                                           **
**                                                                   **
***********************************************************************

* COGUPDT.PRG
* LAST UPDATE 18 JAN 84
*
STORE T TO G:CONTINUE
DO WHILE G:CONTINUE

*****  DISPLAY OPTIONS AND ACCEPT CHOICE

   ERASE
   @ 6,24 SAY '***** COG FILE PROCESSING *****'
   @ 9,28 SAY '1 - ADD COG'
   @ 10,28 SAY '2 - UPDATE COG'
   @ 11,28 SAY '3 - DELETE COG'
   @ 12,28 SAY '4 - RETURN TO UTILITY MENU'
   STORE ' ' TO G:REPLY
   @ 15,40 GET G:REPLY
   READ
   DO WHILE G:REPLY < '1' .OR. G:REPLY > '4'
      @ 23,32 SAY 'ENTER 1 - 4 ONLY' + CHR(7)
      @ 15,40 GET G:REPLY
      READ
   ENDDO
   DO CASE

*****  IF CHOICE IS TO QUIT, RELEASE LOCAL MEMORY VARIABLES
*****  AND RETURN TO CALLING PROGRAM

      CASE G:REPLY = '4'
         RELEASE ALL LIKE G:*
         RETURN
*****    IF CHOICE IS TO ADD, PROMPT FOR AND ACCEPT INPUT

      CASE G:REPLY = '1'
         STORE '      ' TO G:IM
         STORE '  ' TO G:COG
         ERASE
         @ 6,24 SAY 'ENTER DATA FOR COG BEING ADDED'
         @ 9,32 SAY 'COG              ' GET G:COG PICTURE '9A'
         READ
         STORE !(G:COG) TO G:COG
         SELECT PRIMARY

*****    CHECK FOR DUPLICATE RECORD

         USE D:COG INDEX D:COGS
         FIND &G:COG
         IF # <> 0
            @ 22,14 SAY 'RECORD CURRENTLY EXISTS ';
                + '- STRIKE ANY KEY TO CONTINUE'+ CHR(7)
            WAIT
         ELSE
            STORE T TO G:GETIM
            DO WHILE G:GETIM

*****    PROMPT FOR AND ACCEPT ITEM MANAGER

               @ 10,32 SAY 'ITEM MANAGER ' GET G:IM
               SELECT SECONDARY
               USE D:ADDRESS INDEX D:IM
               READ
               STORE !(G:IM) TO G:IM

*****    CHECK TO SEE IF IM RECORD EXISTS

               FIND &G:IM
               IF # <> 0
                  STORE F TO G:GETIM
                  SELECT PRIMARY
                  APPEND BLANK
                  REPLACE COG WITH G:COG, IM WITH G:IM
               ELSE

*****    IF ITEM MANAGER NOT ON FILE PROVIDE OPTION TO
*****    CORRECT IM CODE, ADD THE IM RECORD OR EXIT WITHOUT
*****    UPDATE

                  @ 16,27 SAY 'ITEM MANAGER NOT ON FILE'
                  @ 18,30 SAY '1 - CHANGE I.M. CODE'
                  @ 19,30 SAY '2 - ADD ITEM MANAGER'
                  @ 20,30 SAY '3 - EXIT' + CHR(7)
                  STORE ' ' TO G:REPLY2
                  @ 23,40 GET G:REPLY2 PICTURE '9'
                  READ
                  DO WHILE G:REPLY2<'1' .OR. G:REPLY2>'3'
                     @ 23,40 GET G:REPLY2
                     READ
                  ENDDO
                  DO CASE
                     CASE G:REPLY2 = '1'
                        @ 16,27 SAY '                    ';
                                + '     '
                        @ 18,30 SAY '                     '
                        @ 19,30 SAY '                     '
                        @ 20,30 SAY '         '
                        @ 23,40 SAY ' '
                     CASE G:REPLY2 = '2'
                        STORE F TO G:GETIM
                        STORE '                  ' ;
                             TO G:TITLE
                        STORE '                           ';
                            + '              ' TO G:COMMAND
                        STORE '                  ' TC;
                               G:TITLE
                        STORE '                            ';
                            + '             ' TO G:COMMAND2
                        STORE '               ' TO G:ATTN
                        STORE '                     ' ;
                              TO G:STREET
                        STORE '                     ' ;
                              TO G:CITY
                        STORE '  ' TO G:STATE
                        STORE '     ' TO G:ZIP
                        @ 16,27 SAY '                    ';
                                + '     '
                        @ 18,30 SAY '                     '
                        @ 19,30 SAY '                     '
                        @ 20,30 SAY '        '
                        @ 23,40 SAY ' '
                        @ 14,16 SAY 'TITLE      ' GET G:TITLE
                        @ 15,16 SAY 'COMMAND    ' GET ;
                                   G:COMMAND
                        @ 16,16 SAY 'COMMAND 2  ' GET ;
                                   G:COMMAND2
                        @ 17,16 SAY 'ATTN       ' GET ;
                                   G:ATTN
                        @ 18,16 SAY 'STREET     ' GET ;
                                   G:STREET
                        @ 19,16 SAY 'CITY ' GET G:CITY
                        @ 19,44 SAY ' STATE ' GET G:STATE
                        @ 19,56 SAY 'ZIP CODE ' GET G:ZIP;
                                   PICTURE '99999'
                        READ

*****  ACCEPT NEW IM DATA AND PROMPT FOR CREATE/EXIT OPTION

                        @ 21,20 SAY '1 - POST NEW RECORD';
                            + '            2 - EXIT'
                        STORE ' ' TO G:REPLY3
                        @ 23,40 GET G:REPLY3 PICTURE '9'
                        READ
                        DO WHILE G:REPLY3 < '1' .OR.;
                                G:REPLY3 > '2'
                           @ 23,40 GET G:REPLY3
                           READ
                        ENDDO

*****  CREATE A NEW RECORD

                        IF G:REPLY3 = '1'
                           SELECT PRIMARY
                           APPEND BLANK
                           REPLACE COG WITH G:COG,;
                                   IM WITH G:IM
                           SELECT SECONDARY
                           APPEND BLANK
                           REPLACE IM WITH !(G:IM),TITLE;
 WITH !(G:TITLE),COMMAND WITH !(G:COMMAND),COMMAND2 WITH;
 !(G:CCMMAND2),ATTN WITH !(G:ATTN),STREET WITH !(G:STREET),;
CITY WITH !(G:CITY), ZIP WITH G:ZIP
                        ELSE
                           STORE F TO G:GETIM
                        ENDIF

*****  EXIT WITHOUT CREATING RECORD

                     CASE G:REPLY2 = '3'
```

```
                        STORE F TO G:GETIM
                  ENDCASE
               ENDIF
           ENDDO
         ENDIF

*****  IF CHOICE IS TO UPDATE

      CASE G:REPLY = '2'
         STORE '      ' TO G:IM
         STORE '   ' TO G:COG

*****  PROMPT FOR AND ACCEPT COG BEING UPDATED

         ERASE
         @ 6,24 SAY 'ENTER DATA FOR COG BEING UPDATED'
         @ 9,32 SAY 'COG              ' GET G:COG PICTURE '9A'
         READ
         STORE !(G:COG) TO G:COG
         SELECT PRIMARY

*****  RETREIVE RECORD TO BE UPDATED

         USE D:COG INDEX D:COGS
         FIND &G:COG
         IF # = 0
            @ 22,17 SAY 'RECORD NOT FOUND ';
                 + '- S RIKE ANY KEY TO CONTINUE' + CHR(7)
            WAIT
         ELSE
            STORE T T   :PROCESS

*****  IF RECORD DELETED PROMPT FOR REACTIVATION

            IF *
               STORE ' ' TO G:REPLY3
               @ 18,22 SAY 'RECORD HAS BEEN MARKED FOR';
                          + ' DELETION '
               @ 19,19 SAY 'DO YOU WANT THIS COG ';
                          + 'REACTIVATED <Y OR N>'
               @ 21,40 GET G:REPLY3 PICTURE 'A'
               READ
               DO WHILE !(G:REPLY3) <> 'Y' .AND. !(G:REPLY3) <> 'N'
                  @ 23,31 SAY 'ENTER Y OR N ONLY' + CHR(7)
                  @ 21,40 GET G:REPLY3 PICTURE 'A'
                  READ
               ENDDO

*****  REACTIVATE RECORD IF REQUESTED

               IF !(G:REPLY3) = 'Y'
                  @ 18,22 SAY '                              ';
                          + '              '
                  @ 19,19 SAY '                              ';
                          + '                  '
                  @ 21,40 SAY ' '
                  RECALL
               ELSE
                  STORE F TO G:PROCESS
               ENDIF
            ENDIF
            DO WHILE G:PROCESS
               STORE IM TO G:IM

*****  PROMPT FOR AND ACCEPT UPDATE INFORMATION

               @ 10,32 SAY 'ITEM MANAGER ' GET IM
               READ
               @ 21,20 SAY '1 - POST UPDATE INFORMATION';
```

```
                              + '        2 - EXIT'
                        STORE ' ' TO G:REPLY3
                        @ 23,40 GET G:REPLY3 PICTURE '9'

*****    ACCEPT UPDATE/EXIT SELECTION

                        READ
                        DO WHILE G:REPLY3 < '1' .OR. G:REPLY3 > '2'
                           @ 23,40 GET G:REPLY3
                           READ
                        ENDDO

*****    IF EXIT WITHOUT UPDATE, RESTORE RECORD TO ORIGINAL
*****    VALUE

                        IF G:REPLY3 <> '1'
                           REPLACE IM WITH G:IM
                        ENDIF
                        USE
                        STORE F TO G:PROCESS
                     ENDDO
                  ENDIF

*****    IF CHOICE IS TO DELETE

                CASE G:REPLY = '3'
                  STORE '          ' TO G:IM
                  STORE '    ' TO G:COG

*****    PROMPT FOR AND ACCEPT COG BEING DELETED

                  ERASE
                  @ 6,28 SAY 'ENTER COG BEING DELETED'
                  @ 9,32 SAY 'COG                ' GET G:COG PICTURE '9A'
                  READ
                  STORE !(G:COG) TO G:COG
                  SELECT PRIMARY
                  USE D:COG INDEX D:COGS

*****    VERIFY COGS EXISTENCE

                  FIND &G:COG
                  IF # = 0
                     @ 22,17 SAY 'RECORD NOT FOUND ';
                         + '- STRIKE ANY KEY TO CONTINUE' + CHR(7)
                     WAIT
                  ELSE

*****    VERIFY THAT NO ACTIVE CASES ARE ASSIGNED TO THIS COG

                     IF COUNT > 0
                        @ 10,32 SAY 'ITEM MANAGER ' + IM
                        @ 13,25 SAY 'ACTIVE CASES EXIST FOR THIS COG'
                        @ 14,15 SAY 'ALL ACTIVE CASES MUST BE ';
                                + 'REASSIGNED TO ANOTHER COG'
                        @ 15,21 SAY 'BEFORE DELETE ACTION CAN BE ';
                                + 'COMPLETED'
                        @ 18,27 SAY 'STRIKE ANY KEY TO CONTINUE' ;
                                + CHR(7)
                        WAIT
                     ELSE

*****    NOTIFY OPERATOR THAT RECORD PREVIOUSLY DELETED

                        IF *
                           @ 23,13 SAY 'RECORD PREVIOUSLY DELETED - ';
                                   + 'STRIKE ANY KEY TO CONTINUE'
                           WAIT
                        ELSE
                  @ 10,32 SAY 'ITEM MANAGER ' + IM
                  @ 17,20 SAY '1 - DELETE THIS COG';
                        + '             2 - EXIT'
                  STORE ' ' TO G:REPLY3
                  @ 19,40 GET G:REPLY3 PICTURE '9'

*****  ACCEPT DELETE/EXIT SELECTION

                  READ
                  DO WHILE G:REPLY3 < '1' .OR. G:REPLY3 > '2'
                     @ 23,32 SAY 'ENTER 1 - 2 ONLY' + CHR(7)
                     @ 19,40 GET G:REPLY3
                     READ
                  ENDDO
                  IF G:REPLY3 = '1'
                     DELETE
                     USE
                  ENDIF
               ENDIF
            ENDIF
         ENDIF
   ENDCASE
   USE
ENDDO

***** END OF PROGRAM
```

XXII. DATA BASE PACK MODULE

```
***************************************************************
**                                                           **
**   DATE: 15 JAN 1984                                       **
**   VERSION: 1.0                                            **
**   MODULE NAME: DBPACK                                     **
**   MODULE PURPOSE: PACK THE DATA BASE AND REMOVE           **
**                   RECORDS TAGGED FOR DELETION             **
**                                                           **
**   MODULE INTERFACE DEFINITION                             **
**      INPUTS: C:WHO                                        **
**      OUTPUTS: NONE                                        **
**                                                           **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:                **
**         COMPRESSES THE DATA BASES BY REMOVING RECORDS     **
**         MARKED FOR DELETION.  PRIOR TO EXECUTION, THE     **
**         USERS PASSWORD IS VERIFIED TO ENSURE THAT HE      **
**         IS AUTHORIZED TO PERFORM THE PACK.                **
**                                                           **
**   SUPERORDINATE MODULES: UTILMENU                         **
**   SUBORDINATE MODULES: NONE                               **
**   AUTHOR: R. G. NICHOLS                                   **
**                                                           **
***************************************************************

*****   DISPLAY WARNING MESSAGE

        ERASE
        @  1,25 SAY '***** DATA BASE PACKING *****'
        @  3,24 SAY '* * * * * * * * * * * * * * * *'
        @  4,24 SAY '*                             *'
        @  5,24 SAY '*           WARNING           *'
        @  6,24 SAY '*                             *'
        @  7,24 SAY '*    THIS PROGRAM WILL PACK   *'
        @  8,24 SAY '*  ALL DELETED CASES AND THEN *'
        @  9,24 SAY '*   WILL RE-INDEX THE FILES   *'
        @ 10,24 SAY '*                             *'
        @ 11,24 SAY '*  IF EXISTING FILES ARE      *'
        @ 12,24 SAY '*  LARGE, THIS COULD TAKE     *'
        @ 13,24 SAY '*           HOURS             *'
        @ 14,24 SAY '*                             *'
        @ 15,24 SAY '* * * * * * * * * * * * * * * *'
        @ 17,24 SAY '    ARE YOU SURE YOU WANT TO'
        @ 18,24 SAY '           CONTINUE'
        @ 19,24 SAY '         <ENTER Y OR N>' + CHR(7)
        STORE ' ' TO P:REPLY2
        @ 21,40 GET P:REPLY2

*****   ACCEPT RESPONSE FROM USER

        READ
        DO WHILE !(P:REPLY2)<>'Y' .AND. !(P:REPLY2)<>'N'
           @ 23,32 SAY 'ENTER Y OR N ONLY' + CHR(7)
           @ 21,40 GET P:REPLY2 PICTURE 'A'
           READ
        ENDDO
        @ 23,32 SAY '                 '
        @ 17,40 SAY ' '

***** ACCEPT AND VERIFY PASSWORD PRIOR TO EXECUTION
```

```
            IF P:REPLY2 = 'Y'
               @ 21,30 SAY 'ENTER YOUR PASSWORD '
               STORE '        ' TO P:PASSWORD
               SET CONSOLE OFF
               ACCEPT TO P:PASSWORD
               SET CONSOLE ON
               IF P:PASSWORD <> '        '
                  USE D:TECHCODE INDEX D:TECH
                  FIND &C:WHO
                  IF PSWD = P:PASSWORD .AND. # <> 0

*****   DISPLAY PROCESSING MESSAGE

                     ERASE
                     @ 6,26 SAY ' OPEN DATA BASE BEING PURGED'
                     @ 8,32 SAY 'OF CLOSED CASES'
                     @ 16,29 SAY '***** DO NOT INTERRUPT *****'
                     USE D:OPEN1 INDEX D:OCASE1, D:ONSN
                     PACK
                     USE D:OPEN2 INDEX D:OCASE2
                     PACK
                  ELSE
                     @ 23,18 SAY 'REQUEST ABORTED ';
                        + '- STRIKE ANY KEY TO CONTINUE'
                     WAIT
                  ENDIF
               ENDIF
            ENDIF
            USE
            RELEASE ALL LIKE P:*
            RETURN

***** END OF PROGRAM
```

XXIII. ANALYST FILE UPDATE MODULE

```
*************************************************************
**                                                         **
**   DATE: 15 JAN 1984                                     **
**   VERSION: 1.0                                          **
**   MODULE NAME: ANALYST                                  **
**   MODULE PURPOSE: TO ADD, UPDATE, DELETE, AND LIST      **
**                   ANALYST INFORMATION                   **
**                                                         **
**   MODULE INTERFACE DEFINITION                           **
**      INPUTS: NONE                                       **
**      OUTPUTS: NONE                                      **
**                                                         **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:              **
**         PROVIDE CAPABILITY TO ADD NEW ANALYST CODES,    **
**         UPDATE EXISTING ANALYST RECORDS, DELETE         **
**         ANALYST RECORDS, OR DISPLAY ANALYST RECORDS.    **
**         NEW ANALYST IDS ARE VALIDATED TO ENSURE THAT    **
**         DUPLICATE RECORDS ARE NOT CREATED AND THAT NO   **
**         EMBEDDED BLANKS APPEAR IN THE ID.  DELETED      **
**         ANALYST RECORDS MAY BE RECALLED BY UPDATING     **
**         THE RECORD.  PRIOR TO DELETION OF A RECORD,     **
**         THE ANALYST IS VERIFIED TO HAVE NO ACTIVE       **
**         CASES ASSIGNED.                                 **
**                                                         **
**   SUPERORDINATE MODULES: UTILMENU                       **
**   SUBORDINATE MODULES: NONE                             **
**   AUTHOR: R. G. NICHOLS                                 **
**                                                         **
*************************************************************

STORE T TO A:CONTINUE
DO WHILE A:CONTINUE

*****  DISPLAY OPTIONS AVAILABLE TO THE USER AND ACCEPT
*****  SELECTION

   ERASE
   @ 6,25 SAY ' ***** ANALYST FILE UPDATE *****'
   @ 9,28 SAY '1 - ADD ANALYST'
   @ 10,28 SAY '2 - UPDATE ANALYST'
   @ 11,28 SAY '3 - DELETE ANALYST'
   @ 12,28 SAY '4 - LIST ANALYST'
   @ 13,28 SAY '5 - RETURN TO UTILITY MENU'
   STORE ' ' TO A:REPLY
   @ 16,40 GET A:REPLY PICTURE '9'
   READ

***** VALIDATE SELECTION

   DO WHILE A:REPLY < '1' .OR. A:REPLY > '5'
      @ 23,32 SAY 'ENTER 1 - 5 ONLY' + CHR(7)
      @ 16,40 GET A:REPLY PICTURE '9'
      READ
   ENDDO
   DO CASE

*****  IF QUIT REQUEST, RELEASE LOCAL MEMORY VARIABLES AND
*****  RETURN TO CALLING PROGRAM

      CASE A:REPLY = '5'
         RELEASE ALL LIKE A:*
         RETURN
*****  IF ADD NEW ANALYST SELECTED

      CASE A:REPLY = '1'
         STORE '    ' TO A:TECHCODE
         STORE '        ' TO A:PASSWORD
         STORE '                    ' TO A:NAME

*****  CLEAR SCREEN AND PROMPT FOR NEW ANALYST INFORMATION

         ERASE
         @ 6,22 SAY 'ENTER DATA FOR ANALYST BEING ADDED'
         @ 7,22 SAY '   FOLLOW EACH ENTRY WITH A <CR>'
         @ 10,28 SAY 'ANALYST CODE     ' GET A:TECHCODE
         READ

*****  VALIDATE NO EMBEDDED BLANKS

         DO WHILE $(A:TECHCODE,1,1)=' ' .OR.;
            $(A:TECHCODE,2,1)=' ' .OR. $(A:TECHCODE,3,1);
            =' ' .OR. $(A:TECHCODE,4,1)=' '
            @ 23,23 SAY 'ANALYST CODE CANNOT CONTAIN';
                      + ' BLANKS' + CHR(7)
            @ 10,45 GET A:TECHCODE
            READ
         ENDDO
         @ 23,23 SAY '                                  '
         STORE !(A:TECHCODE) TO A:TECHCODE

*****  VALIDATE FOR DUPLICATE USER ID

         USE D:TECHCODE INDEX D:TECH
         FIND &A:TECHCODE
         IF # <> 0
            @ 22,14 SAY 'RECORD CURRENTLY EXISTS ';
                      + '- STRIKE ANY KEY TO CONTINUE'
            WAIT
         ELSE
            @ 12,28 SAY 'ANALYST NAME    ' GET A:NAME
            READ
            SET CONSOLE OFF
            STORE T TO A:ENTERPSW

*****  PROMPT FOR USER PASSWORD AND VERIFICATION OF THE
*****  PASSWORD

            @ 14,28 SAY 'PASSWORD       '
            DO WHILE A:ENTERPSW
               @ 14,44 SAY ' '
               ACCEPT TO A:PASSWORD
               STORE '            ' TO A:VERIFY
               @ 16,28 SAY 'VERIFY PASSWORD '
               ACCEPT TO A:VERIFY
               IF A:PASSWORD <> A:VERIFY
                  @ 23,5 SAY 'VERIFICATION PASSWORD DOES ';
                           + 'NOT MATCH - REENTER PASSWORD';
                           + ' AND REVERIFY' + CHR(7)
                  STORE '        ' TO A:PASSWORD
               ELSE
                  STORE F TO A:ENTERPSW
               ENDIF
            ENDDO
            SET CONSOLE ON

*****  CREATE THE NEW ANALYST RECORD

            APPEND BLANK
            REPLACE TECHCODE WITH !(A:TECHCODE), NAME WITH;
            !(A:NAME), PSWD WITH A:PASSWORD
          USE
        ENDIF

*****   IF UPDATE ANALYST SELECTED

      CASE A:REPLY = '2'
        STORE '                         ' TO A:NAME
        STORE '     ' TO A:TECHCODE

*****   PROMPT FOR AND ACCEPT ANALYST CODE

        ERASE
        @ 6,15 SAY 'ENTER ANALYST CODE FOR RECORD TO BE';
               + ' UPDATED ' GET A:TECHCODE
        READ
        STORE !(A:TECHCODE) TO A:TECHCODE

*****   VALIDATE CODES EXISTENCE

        USE D:TECHCODE INDEX D:TECH
        FIND &A:TECHCODE
        IF # = 0
          @ 22,17 SAY 'RECORD NOT FOUND ';
                  + '- STRIKE ANY KEY TO CONTINUE'
          WAIT
        ELSE
          STORE T TO A:PROCESS

*****   IF MARKED FOR DELETION, SEE IF RECORD SHOULD BE
*****   REACTIVATED

          IF *
            STORE ' ' TO A:REPLY2
            @ 18,22 SAY 'RECORD HAS BEEN MARKED FOR';
                    + ' DELETION'
            @ 19,18 SAY 'DO YOU WANT THIS ANALYST ';
                    + 'REACTIVATED <Y OR N>'
            @ 21,40 GET A:REPLY2 PICTURE 'A'
            READ
            DO WHILE A:REPLY2<>'Y' .AND. A:REPLY2<>'N'
              @ 23,31 SAY 'ENTER Y OR N ONLY' + CHR(7)
              @ 21,40 GET A:REPLY2 PICTURE 'A'
              READ
            ENDDO
            IF !(A:REPLY2) = 'Y'
              RECALL
              @ 18,22 SAY '                         ';
                      + '          '
              @ 19,18 SAY '                         ';
                      + '                   '
              @ 21,40 SAY ' '
            ELSE
              STORE F TO A:PROCESS
            ENDIF
          ENDIF

*****   PROMPT FOR AND ACCEPT UPDATE INFORMATION

          DO WHILE A:PROCESS
            STORE NAME TO A:NAME
            @ 8,15 SAY 'ENTER NEW NAME DATA  ' GET NAME
            READ
            @ 21,20 SAY '1 - POST UPDATE INFORMATION';
                    + '          2 - EXIT'
            STORE ' ' TO A:REPLY2
            @ 23,40 GET A:REPLY2 PICTURE '9'
*****   ACCEPT UPDATE/EXIT OPTION SELECTION
```

```
               READ
               DO WHILE A:REPLY2 < '1' .OR. A:REPLY2 > '2'
                  @ 23,40 GET A:REPLY2 PICTURE '9'
                  READ
               ENDDO
               IF A:REPLY2 = '1'
                  REPLACE NAME WITH !(NAME)
               ELSE
                  REPLACE NAME WITH A:NAME
               ENDIF
               STORE F TO A:PROCESS
            ENDDO
            USE
         ENDIF

*****  IF DELETE OPTION SELECTED

      CASE A:REPLY = '3'
         STORE '                         ' TO A:NAME
         STORE '    ' TO A:TECHCODE

*****  PROMPT FOR AND ACCEPT ANALYST CODE

         ERASE
         @ 6,15 SAY 'ENTER ANALYST CODE FOR RECORD TO BE DELETED ';
               GET A:TECHCODE
         READ
         STORE !(A:TECHCODE) TO A:TECHCODE
         USE D:TECHCODE INDEX D:TECH
         FIND &A:TECHCODE
         IF # = 0
            @ 22,17 SAY 'RECORD NOT FOUND - STRIKE ANY KEY';
                      + ' TO CONTINUE'
            WAIT
         ELSE

*****  CHECK FOR ACTIVE RECORDS ASSIGNED

            IF ACTIVE>0 .OR. TRANSMIT>0 .OR. RESPOND>0
               @  9,21 SAY 'ACTIVE RECORDS EXIST FOR ';
                          + 'THIS ANALYST'
               @ 10,21 SAY 'ALL ACTIVE RECORDS MUST BE';
                          + ' REASSIGNED'
               @ 11,21 SAY '            PRIOR TO DELETION'
               WAIT
            ELSE

*****  INDICATE IF RECORD PREVIOUSLY DELETED

               IF *
                  @ 23,13 SAY 'RECORD PREVIOUSLY DELETED ';
                            + '- STRIKE ANY KEY TO CONTINUE'
                  WAIT
               ELSE

*****  PROVIDE OPTION TO DELETE OR EXIT

                  @ 8,32 SAY 'ANALYST ' + NAME
                  @ 17,20 SAY '1 - DELETE THIS ANALYST  ';
                             + '          2 - EXIT'
                  STORE ' ' TO A:REPLY2
                  @ 23,40 GET A:REPLY2 PICTURE '9'
                  READ
                  DO WHILE A:REPLY2 < '1' .OR. A:REPLY2 > '2'
                     @ 23,40 GET A:REPLY2 PICTURE '9'
                     READ
                  ENDDO
                  IF A:REPLY2 = '1'
                     DELETE
```

```
                    ENDIF
                 ENDIF
              ENDIF
           ENDIF

*****  IF LIST OPTION

         CASE A:REPLY = '4'
            USE D:TECHCODE INDEX D:TECH
            SET DELETED ON
            ERASE
            DISPLAY ALL FIELD TECHCODE, NAME OFF
            ?
            ?
            ?
            ? '                      STRIKE ANY KEY TO CONTINUE'
            SET DELETED OFF
            WAIT
      ENDCASE
ENDDO

***** END OF PROGRAM
```

XXIV. PASSWORD FILE UPDATE MODULE

```
************************************************************
**                                                        **
**   DATE: 15 JAN 1984                                    **
**   VERSION: 1.0                                         **
**   MODULE NAME: PASS                                    **
**   MODULE PURPOSE: PASSWORD UPDATING                    **
**                                                        **
**   MODULE INTERFACE DEFINITION                          **
**      INPUTS: NONE                                      **
**      OUTPUTS: NONE                                     **
**                                                        **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:             **
**         ACCEPTS THE USER ID AS INPUT, REQUESTS THE     **
**         CURRENT PASSWORD, VALIDATES IT, AND REQUESTS   **
**         THE ENTRY AND VALIDATION OF THE NEW PASSWORD.  **
**         AN ILLEGAL USER ID OR AN ILLEGAL PASSWORD WILL **
**         CAUSE THE PASSWORD UPDATE TO TERMINATE.        **
**                                                        **
**   SUPERORDINATE MODULES: UTILMENU                      **
**   SUBORDINATE MODULES: NONE                            **
**   AUTHOR: R. G. NICHOLS                                **
**                                                        **
************************************************************

*****  CLEAR SCREEN AND PROMPT FOR USER ID

ERASE
STORE '        ' TO P:PASSWORD
STORE '    ' TO P:TECHCODE
@ 6,21 SAY '***** PASSWORD UPDATE PROCESSING *****'
@ 9,24 SAY 'ENTER DESIRED ANALYST CODE  ' GET P:TECHCODE

*****  ACCEPT AND VALIDATE USER ID

READ
STORE !(P:TECHCODE) TO P:TECHCODE
USE D:TECHCODE INDEX D:TECH
FIND &P:TECHCODE
IF # = 0
   @ 22,14 SAY 'RECORD DOES NOT EXIST ';
            + '- STRIKE ANY KEY TO CONTINUE'+CHR(7)
   WAIT
ELSE
   SET CONSOLE OFF
   SET EXACT ON

*****  ACCEPT AND VALIDATE PASSWORD

   @ 11,24 SAY 'ENTER CURRENT PASSWORD '
   ACCEPT  TO P:PASSWORD
   IF P:PASSWORD = '        '
      SET CONSOLE ON
      RELEASE ALL LIKE P:*
      RETURN
   ENDIF
   STORE P:PASSWORD+'        ' TO P:PASSWORD
   IF $(P:PASSWORD,1,8) <> PSWD
      @ 22,8 SAY 'INVALID PASSWORD FOR ANALYST '+P:TECHCODE;
               + ' - STRIKE ANY KEY TO CONTINUE' + CHR(7)
      WAIT
   ELSE
```

```
        STORE T TO P:GETPASWD

*****  ACCEPT NEW PASSWORD AND VALIDATION OF NEW PASSWORD

        DO WHILE P:GETPASWD
           @ 13,24 SAY 'ENTER NEW PASSWORD     '
           ACCEPT TO P:PASSWORD
           @ 15,24 SAY 'VERIFY NEW PASSWORD    '
           ACCEPT TO P:VERIFYPW
           IF P:PASSWORD <> P:VERIFYPW
              @ 23,5 SAY 'VERIFICATION PASSWORD DOES NOT MATCH';
                       + '  - REENTER PASSWORD AND REVERIFY' + CHR(7)
           ELSE
              STORE F TO P:GETPASWD
           ENDIF
        ENDDO
        REPLACE PSWD WITH P:PASSWORD
        USE
     ENDIF
     SET EXACT OFF
     SET CONSOLE ON
ENDIF

*****  RELEASE LOCAL MEMORY VARIABLES AND RETURN TO
*****  CALLING PROGRAM

RELEASE ALL LIKE P:*
RETURN

***** END OF PROGRAM
```

XXV. DATA BASE RE-INDEX MODULE

```
***********************************************************
**                                                       **
**   DATE: 20 JANUARY 1984                               **
**   VERSION: 1.0                                        **
**   MODULE NAME: UTILNDX                                **
**   MODULE PURPOSE: RE-INDEX ALL INDEX FILES            **
**   MODULE INTERFACE DEFINITION                         **
**      INPUTS: C:WHO, C:JULIAN                          **
**      OUTPUTS: NONE                                    **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:            **
**                                                       **
**        A UTILILITY FOR THE SUPERVISOR TO RECONSTITUTE **
**        THE INDEX FILES WHEN THE SYSTEM DESTROYS THE   **
**        CURRENT INDEXES. AFTER ACCEPTANCE OF THE       **
**        SUPERVISOR'S CHOICE TO PROCEED, EACH INDEX FILE **
**        IS DELETED AND THEN REBUILT USING THE DATA IN  **
**        ALL OF THE DATABASE FILES.  THIS TAKES A LONG  **
**        TIME TO PROCESS, AND CAN BE ACCOMPLISHED ONLY  **
**        WHEN IT IS THE ONLY PROGRAM RUNNING ON THE     **
**        QDR SYSTEM.                                    **
**                                                       **
**   SUPERORDINATE MODULES: UTILMENU                     **
**   SUBORDINATE MODULES: NONE                           **
**   AUTHOR: J.G. BOYNTON                                **
**                                                       **
***********************************************************

*****  DELETE CURRENT INDICES

DELETE FILE D:OCASE1.NDX
DELETE FILE D:ONSN.NDX
DELETE FILE D:OCASE2.NDX
DELETE FILE D:CCASE1.NDX
DELETE FILE D:CNSN.NDX
DELETE FILE D:CCASE2.NDX

*****  BEGIN REINDEX OF FILES

USE D:OPEN1
INDEX ON CASE TO D:OCASE1
INDEX ON NSN TO D:ONSN

USE D:OPEN2
INDEX ON CASE TO D:OCASE2

USE D:CLOSE1
INDEX ON CASE TO D:CCASE1
INDEX ON NSN TO D:CNSN

USE D:CLOSE2
INDEX ON CASE TO D:CCASE2

USE D:TECHCODE
INDEX ON TECHCODE TO D:TECH

USE D:COG
INDEX ON COG TO D:COGS

USE D:WHEREDIS
INDEX ON CODE TO D:DISCODE
```

```
USE D:ADDRESS
INDEX ON IM TO D:IM

RETURN

***** END OF PROGRAM
```

XXVI. OPEN CASE REPORT

```
*************************************************************
**                                                         **
**   DATE: 5 JANUARY 1984                                  **
**   VERSION: 1.0                                          **
**   MODULE NAME: OCASERPT                                 **
**   MODULE PURPOSE: PROVIDE ANALYST WITH LISTING OF ALL   **
**                   OF HIS OPEN CASES IN THE DATA BASE.   **
**   MODULE INTERFACE DEFINITION                           **
**      INPUTS: C:WHO, C:JULIAN                            **
**      OUTPUTS: NONE                                      **
**   MODULE PROCESSING NARRATIVE DESCRIPTION:              **
**                                                         **
**        ALLOWS THE ANALYST TO CHOOSE BETWEEN RECEIVING   **
**        A LIST OF HIS CURRENTLY OPEN CASES OR TO RETURN  **
**        TO THE MAIN PROCESSING MENU. THE PROGRAM DOES A  **
**        SEQUENTIAL SEARCH OF THE DATA BASE TO IDENTIFY   **
**        THE APPROPRIATE CASES, AND LISTS THEM TO EITHER  **
**        THE SCREEN OR THE PRINTER. LIST SHOULD NOT BE    **
**        SENT TO THE PRINTER IF ANYONE ELSE WILL BE       **
**        USING IT BEFORE THE PROCESS IS COMPLETED.        **
**                                                         **
**   SUPERORDINATE MODULES: MENU1                          **
**   SUBORDINATE MODULES: NONE                             **
**   AUTHOR: J.G. BOYNTON                                  **
**                                                         **
*************************************************************
ERASE
STORE ' ' TO V:PRINT
TEXT



                    YOU MAY RECEIVE THE REPORT ON THE SCREEN OR

                              AT THE PRINTER

                               1 - SCREEN
                               2 - PRINTER
                               3 - EXIT



                          < ENTER YOUR CHOICE >
ENDTEXT
@ 22,35 SAY' ' GET V:PRINT
READ

IF V:PRINT = '1'
     ERASE
     USE D:OPEN1
     REPORT FORM OPENCASE FOR WHO = C:WHO
     ? 'PRESS ANY KEY TO CONTINUE'
     WAIT

ELSE
     IF V:PRINT = '2'
          ERASE
```

```
                USE D:OPEN1
                SET PRINT ON
                REPORT FORM OPENCASE FOR WHO = C:WHO
                EJECT
                SET PRINT OFF
                ? 'PRESS ANY KEY TO CONTINUE'
                WAIT
        ENDIF
ENDIF
RELEASE V:PRINT
RETURN

***** END OF PROGRAM
```

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